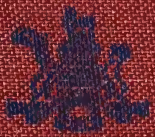
FOODS

AND

HOME MANAGEMENT



rnment of the Province of British Columbia

DEPARTMENT OF EDUCATION

GOVERNMENT OF
THE PROVINCE OF BRITISH COLUMBIA

DEPARTMENT OF EDUCATION

Foods and Home Management

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(Revised 1957)

Contents

Foods and Home Management

Homemaking is an occupation which demands the best one can give in skills, abilities and talents. To be prepared to fulfil well all of the duties and functions of a good general manager of a home is a worthy goal.

Family goals and patterns will vary, but the main objective of each family is a healthy, wholesome, effective and satisfying family life.

To make a house a home, in the real sense of the word, the homemaker must recognize the many responsibilities entailed in good home management.

The home should be a restful place for all members of the family to enjoy and find relaxation, the children of the family are cared for and trained to be useful, happy people.

The household activities should be so well planned and organized that all members of the family may share happily and no one finds these duties a burden.

The homemaker buys the food, clothing and furnishings for the family. She is responsible for the management of money matters, with the needs and satisfaction of all members of the family in mind.

An orderly house is important to family living. Cleanliness and tidiness make for orderliness. Orderliness, in turn, gives a feeling of quiet and calmness. The work of the house should proceed with a happy rhythm, but plans must be flexible. Well cared for equipment makes this part of the housekeeping easier and also saves important time for the homemaker.

The homemaker is largely responsible for the selection and care of clothing for the family. She, also, has the responsibility of selecting and preparing appetizing meals that are nutritionally adequate. Meal-time should be a pleasant time for the family, with simple, orderly and attractive service.

One of the aims of Home Economics is to help the beginning homemaker. Management and planning are a most important part of the work of the homemaker. Every young homemaker must learn to plan. This is the first step to good management. Efficiency and good management are learned with patience and practice.

The Kitchen

Since the average home-maker spends a large proportion of her time in the kitchen, this is one of the most important rooms in the house. The efficient kitchen is one that is planned to allow the maximum amount of work with the minimum amount of effort.

In planning a kitchen for a new home, or in remodelling an old one, it is important to consider the purposes for which it will be used, apart from the food preparation for the family.

Among the duties of the homemaker, while at work in the kitchen, are supervising children at play, answering the front door as well as the back—answering the telephone, and setting the dining room table. These should be considered when planning the location of the kitchen in relation to the rest of the house.

Lighting

The proper lighting of the work areas in the kitchen depends upon the size of the room, how it is arranged and decorated. Windows placed at two sides of the room are preferable for ventilation and should be so arranged that the worker gets good light at the work-table, the sink, and the stove, if possible from the left. Windows should not be too low, in order that it may be possible to place a sink or a work-table below them. In remodelling a kitchen, the long, vertical window may be turned to a horizontal position, and made to slide back at the sides for ventilation. A swinging panel in the outside door may serve the same purposes as a second window.

Artificial lighting should be so arranged that the worker will not need to strain her eyes and nerves because of inefficient light. Every centre should be lighted so that the worker's shadow never falls upon her work. Recessed tubular lighting or shaded bulbs on both sides of the sink, to throw light on work surfaces, can be installed on the underside of cabinets located above work surface. There should be a light over the sink, over the stove and over the food preparation centre.

Arrangement of Kitchen

The shape of the kitchen is not as important to its efficiency, as is the arrangement of the equipment within the room. An efficient kitchen may be L-shaped, square, U-shaped, corridor, or one wall.

The major kitchen activities — food preparation, cooking and serving and cleaning-up — centre around the refrigerator, range and sink. Arranging a kitchen for efficiency and convenience automatically divides it into the *three* work centres. Equipment used for dining and family activities may be grouped in a fourth centre — the family living centre; a table, a comfortable chair, baby tending and play corner.

The food preparation centre should include the refrigerator, with adjacent work areas and cabinets for storage of supplies and equipment used in the centre. Tools for cutting, mixing, beating and blending should be stored in this area, also measuring cups and spoons, mixing bowls and baking pans.

The cooking and serving centre should have space for skillets, saucepans, covers, forks, potholders, cake testers and serving trays, etc.

The sink centre should be used to store equipment for the preparation of vegetables and all dishwashing equipment and supplies.

Shelves, drawers, special racks, hooks and other types of hangers may be used for good arrangement of equipment in each centre.

It is important to have the height of the work areas suited to the height of the worker. Correct working surface heights vary with the height of the individual—counters and cupboards should be built to such heights that the homemaker does not need to stoop at her work nor does she have to reach too high. Work surfaces that are right for dishwashing and preparing vegetables may be too high for beating and kneading. A pull-out board, approximately 25 inches from the floor, permits the worker to sit comfortably at work. An adjustable stool, with an adjustable foot rest, makes it possible to adjust the stool to any height of work area.

Finish of Walls and Floors

This adds much to the attractiveness of the kitchen. The floor should be easy to clean, easy to walk on, and pleasing in appearance. Linoleum is probably the most desirable floor covering. Inlaid linoleum is more expensive than printed linoleum, but is more satisfactory.

Inlaid linoleums have a marbelized or tile-patterned effect, which carries the colour right through the entire thickness. Linoleum, when laid, should not be varnished, but given two or three coats of floor wax. It should then be waxed weekly to keep the surface resilient and easy to clean.

It is most important that kitchen surfaces be smooth and easily cleaned. Washable paint for the walls and ceiling needs to be washed no oftener than twice yearly. Marks may be sponged off as they appear. In kitchens, when natural finishes on wood surfaces, such as knotty pine, are desired, the finish is blond or pale in tone. Such finishes are kept well waxed, to prevent darkening.

Care of Equipment and Utensils

Dish Washing

Preparation.—1. Collect all dishes; scrape and rinse; pile together dishes that are alike at the right hand side of the sink.

2. Soak dishes, which have contained starch, milk or eggs, in cold water. Soak dishes, which have contained fat or sugar in hot water.

3. Wipe out all greasy pans with paper before washing.

4. If you use the sink bowl for washing, instead of a dishpan, be sure to empty all coffee cups, glasses, and utensils that have been soaking, before you begin the actual washing.

5. Wash from right to left. For most right-handed people and in most kitchens, this is the easiest order. Of course, if you are left-handed or if the dish cupboard is on the right, you will work from left to right, to have a smooth flow of work.

Washing.—1. Half fill the sink with hot water, add soap or detergent.

2. Wash the cleanest dishes first—glasses, silverware, all the dishes (beginning with cups and saucers), then cutlery and cooking utensils.

3. Place the dishes in the dish drainer.

4. Rinse with hot water. Glasses and silver should be dried with a lintless towels, but dishes rinsed in very hot water will dry without wiping.

5. Wash out the dishcloth and dish towels and hang them to dry.

6. Wash, rinse and dry the sink.

Care of the Sink

Do not pour into the sink, grease or other foods which may close the pipe. Never pour acids into the sink. Strong acids weaken the glaze which will cause porcelain to stain readily. After every dishwashing, flood the sink with very hot water.

Washing soda dissolved in *boiling water* cuts grease. Use a large amount of water to rinse the sink after using washing soda.

Porcelain sinks are cleaned with any non-gritty cleanser. Rust stains may need a mild acid, such as lemon juice or vinegar.

For badly stained surfaces mix 1 cup water, ¼ cup soap flakes, 2 tablespoons whiting and 1 tablespoon kerosene. This is useful for cleaning the bath tub, washbowl and sink.

Care of the Refrigerator

The manufacturer and the people who sell you home appliances hope you will read the directions that come with them. The manufacturers spend a great deal of time in compiling these directions, making them simple so anyone can understand. The customer who gets the most out of equipment is the one who studies the directions, knows what to expect from the equipment and how to care for it.

Read carefully the manufacturer's directions for defrosting.

The cleanliness of any refrigerator is necessary for economy and health.

Keep the door tightly closed. A refrigerator door should not be slammed to close it. Lift the latch with your hand and close gently. Slamming the door may weaken the latch so that in time it will fail to fasten the door securely. Do not open the door more often than is necessary.

The Ice Refrigerator

1. Like the electric refrigerator, the ice refrigerator should be thoroughly cleaned. Remove all the food and dishes.
2. Prepare a solution of clear, warm water and washing soda (1 tablespoon to 1 gallon of water.)
3. Rinse off the shelves and dry thoroughly. Wash and rinse the walls and replace the shelves.
4. Wash the ice compartment thoroughly with the soda solution, using a brush to clean the drain pipe.
5. Food should never be allowed to spoil in the refrigerator.
6. Avoid storing hot foods or strong-flavoured foods in the refrigerator.

Care of Stoves

The Gas Stove

Many of the modern gas stoves are controlled with a pilot light. The oven, too, has a pilot light control and a safety device that will cut off the gas if the pilot light is extinguished.

Cleaning the Gas Range

Read the manufacturer's directions for care and use.

1. Burners may be removed and cleaned with sudsy water and a mild abrasive. Scrub with a stiff brush, using the abrasive on stubborn stains only.
2. Wash grids and drip pans, and dry well.
3. All other cleaning of the gas range is the same as for the electric range.

The Electric Stove

Read carefully the manufacturer's directions for care and use.

Proper use of the electric stove is an important part of its care. Start food boiling on a high heat and finish cooking it at the very lowest heat at which boiling will continue. This not only conserves electricity, but prevents unnecessary cleaning from food that boils over.

Pots and pans should be the flat bottom type to fit the element exactly. This, too, reduces operational cost.

Prevent unnecessary grease spattering by using moderate heat when frying and roasting.

Oven racks, placed level and at correct heights in the oven, will ensure efficient baking results. Check position of rack before turning on the electricity—this will save heat and handling of hot racks.

Cleaning

The modern electric stove is built in such a manner that all parts are removable and easy to clean.

1. Elements swing upward or lift out easily. The reflector pans may be removed and washed, dried and replaced. Any stubborn stains may be removed with a fine steel wool. The chrome rings should be wiped off each time with a damp cloth and dried.

2. The drip pan under the elements should be washed and dried each time food spills through.

3. The entire enamel surface should be wiped with a damp, sudsy cloth, when cool, each time the stove has been used.

4. Deep-well cookers can be removed and washed as any ordinary cooking utensil, after each use.

5. Oven walls, door and baffile plate can be wiped with soap and water and dried. Occasionally clean the entire oven thoroughly. To loosen grease, place a pan of household ammonia and water solution, or cloth saturated with ammonia, in the oven while it is still warm. Leave for several hours or overnight. Then remove racks and walls of the oven and wash with soap and water. Stubborn stains may be removed with steel wool.

Care of the Broiler

Immediately after the broiler has been used, drain off fat, sprinkle with detergent and place a moist dish cloth, wrung out in warm water, over it. This prevents grease from clinging to the rack, and makes it easy to wash with the rest of the kitchen utensils. Burned on spots may be removed with fine steel wool.

The Coal-Stove

Lighting.—1. Remove all ashes so that fuel when placed may be supplied with air.

2. Place crumpled paper on the bottom of the fire-box.

3. Place sticks of kindling-wood criss-cross on the paper.

4. Place a few pieces of coal on top of the kindling.

5. Open all dampers to provide a direct draught.

6. Apply a lighted match to the paper.

Problem.—To explain a draught.

Apparatus and Materials.—A candle, a saucer, a slender lamp-chimney, and matches.

Method.—1. So as to make the candle stand upright in the saucer, melt it slightly on the bottom by holding to it a lighted match. Place it quickly in

the centre of the saucer and when the wax hardens, the candle will stand firmly.

2. Light the candle and hold the chimney over it, keeping it at least ½ inch from the bottom.

3. Place a piece of cardboard over the top of the chimney.

4. Remove the cardboard and chimney, and relight the candle. Replace the chimney, allowing it to rest on the saucer.

Observations.—1. Does the candle continue to burn under conditions as outlined in (2)?

2. What happens in (3)?

3. What happens in (4)?

Conclusion.—What conditions seem to be necessary to keep the candle burning?

A continuous stream of air cannot be supplied to a fuel unless there is an opening both *below* and *above* it.

In the stove the air enters through the grating of the fire-box, while the gases resulting from the burning fuel pass up the chimney.

The passage to the chimney is controlled by the opening and closing of small doors called "dampers." To start a fire it is necessary for these dampers to be so arranged that the smoke will be allowed to pass directly out through the chimney. The damper in front of the fire-box and the one in the pipe must be left open to provide what is called a "direct draught."

With a direct draught the fire burns briskly, the top of the stove becomes heated, but the oven is heated very slightly. Foods placed in the oven would not cook on the bottom.

The oven is just like a box closed in on all sides, but placed so that there is a space around it. By closing the damper in the pipe the hot gases cannot pass out of the chimney directly, but are forced through the space surrounding the oven and then out of the chimney. By doing this they heat the bottom of the oven and make it possible to bake satisfactorily. When the dampers are so arranged that the hot gases pass around the oven, the draught is said to be "indirect."

Regulating Oven.—1. Use a thermometer to determine temperature.

2. Check fire and oven-heat:—

(a) By closing front dampers.

(b) By lifting a lid off the stove. A rush of cold air on top of the coal makes it burn more slowly.

Cleaning.—Allow to partly cool. Wash off with soap and water. Remove spots with fine steel wool.

Care of Garbage-can

1. Line the garbage-can with a clean newspaper, or use grocers' brown bags.

2. Put only solid material in the can; drain off all liquid. The use of a sink strainer helps.

3. Empty the can at least once each day.

4. Keep the can covered.

5. Scrub out and scald the can thoroughly each week.

6. Wrap garbage well before disposing of it. Tie securely with string.

7. Rinse out tin cans before disposing, to prevent odours from stale food.

Care of Bread-box

1. Wash weekly with hot water and soap.
2. Rinse with boiling water.
3. Dry and air in the sun, if possible.

Care of Bake-board

1. Scrape with the back of a knife and remove loose material.
2. Wash with cloth and cold water.
3. Scrub by way of grain, using soap. Do not soak.
4. Rinse well with warm water.
5. Dry thoroughly, placing in the sun, if possible.

NOTE.—If oil or fat is spilt on wooden surfaces, pour cold water on to harden it, or sprinkle it with flour or starch to absorb it; then scrape and scrub with hot water and soap.

Care of Milk-bottles

1. Rinse at once with cold water and leave filled until ready to wash.
2. Wash in hot, soapy water and rinse with very hot water.

Care of Silver

1. To avoid scratching, wash kinds separately. Hold a few pieces in the hand and wash.
2. Use hot, soapy water.
3. Dry and polish by rubbing with a towel.
4. Store neatly in cases or in a drawer divided into the sections for the purpose.

Cleaning of Silver

Silver, used only occasionally, may be wrapped in tarnish resistant paper or cloth.

METHOD I

Removal of tarnish by use of a silver polish. A jar of silver polish at the sink will encourage prompt cleaning.

1. Apply the liquid polish with a soft cloth or soft toothbrush, in lengthwise strokes. If powdered polish is used it should be moistened to a paste first.
2. Allow to dry, then rub off.
3. Wash in hot, soapy water and dry thoroughly.

NOTE.—A cloth, treated with silver polish or jeweller's rouge, may be used.

METHOD II

Removal of tarnish by electrolytic action.

This method should not be used on silver which has shading or is oxidized. Hollowware or flatware, with hollow handles, must not be cleaned in this way.

1. Use an aluminum pan (not tarnished).
2. Put water, salt, and baking-soda into the pan. (For each quart of water use 1 teaspoon salt and 1 tablespoon baking-soda.)
3. Place silver in the pan. There should be enough water to cover it.
4. Place pan over the heat and leave it until the tarnish disappears.
5. Pour off the water, wash in hot, soapy water, rinse and dry thoroughly.
6. Instead of an aluminum pan, a granite pan may be used in which an aluminum strip or spoon is placed. It is necessary that the pieces of silver touch the aluminum in the process.
7. Buff with a soft cloth to polish.

Cleaning of Copper and Brass

1. Wash thoroughly.
2. Dip soft cloth in vinegar and then in whiting or salt and scour the metal.
3. Wash and dry, rubbing with a soft cloth. There are commercial cleansers, which are most effective.

Cleaning Steel

Stainless steel usually requires only soap and water for cleaning. Sometimes, however, a film forms on stainless steel which is not easily removed with soap and water. This film yields to a mild scouring powder applied with a soft, damp cloth. Mild scouring powder may, also, be used to bring out a brighter lustre, after washing with soap and water. Rubbing with a soft, dry cloth brings up the lustre. Knives should be washed and dried as soon as possible after using, because certain foods containing salt and acids are apt to pit the metal if left on for an extended period.

Knife blades of regular tempered steel should always be dried thoroughly to avoid rust. If stains appear, scrub them with a cork or paper wad, dipped in scouring powder.

Cleaning Enamelware

1. Soak, to remove food, and wash in sudsy water.
2. Stains may be removed with baking-soda or a mild household cleanser.
3. Rinse and dry thoroughly before putting away.

Cleaning Aluminum

1. Use mild soap and hot water.
2. Do not use soda or ammonia. A little weak acid will brighten aluminum.
3. Rub with steel wool when necessary.
4. Boiling with fresh water will soak off any burned food.

Aluminum becomes darkened from certain types of hard water or by alkaline foods.

1. Remove darkened film with a steel wool pad, impregnated with soap.
2. Brighten by boiling a solution of cream of tartar in it or by heating in it acid foods such as rhubarb or tomatoes.
3. Rinse and dry thoroughly after each washing.

Cleaning Heat-Resistant Glass

1. Wash in hot suds, rinse and wipe. Soak to remove stubborn stains.
2. Stains that cannot be removed by soaking may be cleaned off with baking soda. Avoid scratching the surface with harsh abrasives.

Cleaning Cast Iron

1. Season new cast ironware before using according to manufacturer's directions.
2. Wash in hot suds, rinse and dry thoroughly to prevent rusting.
3. Cast iron that has to be stored for a period of time should be oiled or greased before storage. Paraffin wax may be used for this purpose.

If no directions are received with utensil, season by the following method—*before using.*

1. Wash. Scrub with mild scouring powder to remove lacquer coating.
2. Wash and dry thoroughly.
3. Apply a liberal coating of salad oil or unsalted fat to the inside of pan.
4. Set over very low heat for 2 to 3 hours. Rub fat around the utensil every 15-20 minutes. Wipe grease out.
5. Wash in hot soapy water. Rinse and dry thoroughly. It is suggested that for several usings, the inside of the pan be rubbed with unsalted fat. Seasoning takes time to develop.

Cleaning of Nickel

1. Wash with soap and water.
2. Polish with mild scouring powder applied with a soft cloth dampened with ammonia or water.
3. Let dry and polish with dry cloth.

Cleaning of Tin

1. If greased slightly when new and warmed slowly without burning it will not rust.
2. Wash with warm water and soap and dry thoroughly.
3. Do not attempt to keep tin bright. Scouring wears off the tin.

Care of Cleaning-Cloths

Cleaning cloths will not do good work if they are not clean. No one enjoys handling oily, dirty rags.

1. Soak cloths in warm, soapy water.
2. Wash in plenty of hot water, using a good laundry-soap.
3. Rinse thoroughly twice and hang in the sun to dry.

Care of Floors

1. Remove or cover all food before sweeping.
2. Sweep with short, firm strokes, keeping the broom close to the floor, raising as little dust as possible.
3. Gather the dust together and take up with a brush and dust-pan.

Waxed Floors

Daily

1. Sweep with a soft-haired brush.
2. Rub or wipe with an oiled or treated mop.
3. Shake mop well after using.

Weekly

1. Rub all spots with a cloth slightly dampened with liquid wax or turpentine.
2. Allow to dry.
3. Apply new wax
4. Polish with a weighted brush or electric floor polisher.

Seasonal

1. Clean with turpentine or wash with soap and water.
2. Dry, rewax and polish.
3. Replace wear with new wax and polish.

Linoleum Floor Covering

1. Sweep with brush broom or use dry dust mop.
2. A damp mop or cloth may be needed at work areas.

Use a damp mop, if necessary. Paste, liquid or self-polishing waxes are satisfactory for linoleum floors. Self-polishing wax is the most practical choice for kitchens because it is so easy to apply and remove.

Care of Dust Mops

1. Always hang mops. Never leave the heads resting on the floor.
2. Clean with the vacuum cleaner or shake out-of-doors or into a large paper bag. Wash frequently.

Cellulose Sponges and Mops

Wash after each using in warm, soapy water. Rinse thoroughly. Do not twist. These may be sterilized in boiling water, if necessary.

Care of Brooms and Brushes

1. Thoroughly shake after using.
2. Always hang up a broom by the handle. Never let bristles rest on floor.
3. A broom, covered by a cotton bag, helps in dusting walls. Wash bag after using.
4. Dust corn brooms after using.

Care of Vacuum Cleaner

Read the manufacturer's directions first.

1. Remove the dust bag carefully over newspapers, turn it inside out to remove the dust and brush clean. Return to its proper position in the vacuum cleaner.
2. Brush or comb the dust out of all the brushes used.

Care of Varnished Wood — Other Than Floors

1. Use furniture polish or wax. *Avoid* alcohol, soap and water, and ammonia.
2. Apply with very light pressure.
3. Dry perfectly and polish.

Care of Painted Wood

1. Dust wood carefully.
2. Wash with mild soap and warm water.
3. Begin to wash at the top of the wood and work downwards. Use as little water as possible on the wood. Change water often. Do not try to clean with dirty water.
4. Rinse well and dry.

Cleaning Windows

1. Remove curtains and shades.
2. Dust shades on both sides, using a damp cloth.
3. Dust window and woodwork around it both inside and outside.
4. Prepare pan of hot water, adding 1 teaspoon of ammonia to each quart. Alcohol is good in winter-time.
5. Dip a piece of cheese-cloth in the water. Squeeze until almost dry, and wash

the glass well with this. Rinse cheese-cloth frequently. Do the corners carefully, using a skewer if necessary. Begin at the top of the window and work down.

6. Dry with soft, dry cloth, free from lint, or use a chamois.

7. Choose a dull, not a sunny or a frosty day for window-cleaning. The cleaning of the woodwork will depend on whether it is painted or varnished.

SAFETY IN THE HOME

The kitchen can be the most dangerous room in the house. Real kitchen safety depends upon good work habits. Falls cause the greatest number of accidents in the home. Scalds and burns are second in the number of home accidents.

The following rules will help to avoid accidents:

1. All spilled liquids should be wiped up immediately to avoid the danger of slipping.

2. Be sure there are no toys left on the floor to stumble over.

3. Knives stored helter skelter in a drawer increase the danger of cuts. Keep them in a knife rack or box and out of the reach of children.

4. Broken glass should be cleaned up carefully. The smallest pieces can be picked up with a damp piece of paper.

5. Learn how to handle fires—Throw salt on a grease fire if you do not have a small fire extinguisher.

6. Pans with shaky handles should be discarded. Pot handles should be turned so that they do not project over the edge of a stove or over a burner, and should be kept out of the reach of children.

7. Keep all electrical equipment in good repair. Teach children not to tamper with electrical equipment, floor plugs and sockets.

8. Good lighting is important all through the house to prevent falls.

9. Do not use gasoline or kerosene to start coal and wood fires.

10. An uncovered pan of hot water should never be left within the reach of children.

11. Put things away in their proper place. Any object left out of place may be dangerous.

12. Make certain that the stool in the kitchen is safe before standing on it.

There are, of course, other safety rules to be considered in every situation.

QUESTIONS

1. Why should sinks, refrigerators, and cooking utensils receive especial care with regard to cleanliness?

2. What do you consider your best source of information for care of refrigerators and electric ranges? Why?

3. What care would you give a garbage can daily? Weekly?

4. What proportion of washing-soda and water should be used in cleaning the drain-pipe of the sink?

5. How should the enamel parts of a stove be cleaned?

6. Why should an oiled cloth that is used to clean stoves be kept in a covered metal container?

7. What care should you give a bread-box? A bake-board?

8. What inexpensive silver polish could be used on silverware in the home?

9. Describe the electrolytic method of cleaning silver. Would you use this method for oxidized silver or flatware with hollow handles?

10. Is it absolutely essential to rinse silver after washing in hot, soapy water? What reasons could you give for not doing so?

11. Name two cleaning agents for brass.

12. What care should be given to enamelware? Aluminum? Tin? Cleaning cloths? Floors? Waxed floors? Linoleum? Varnished floors? Windows?

13. What is the correct height for a sink?

14. What are the three work centres in the kitchen?

15. Why not soak bakeboards, wooden bowls and other wooden utensils when washing them?

16. State clearly the steps in dish-washing.

LAUNDERING

Laundering is one of the oldest arts in existence. The earliest methods depended entirely on the action of running water, the friction against the stones, and the shaking, twisting, flapping, slapping, or pounding of the clothes. We find today many of the up-to-date washing machines use these methods; or where there is not a machine, one uses a board and rubs the garments against it, thus securing friction.

The old method of washing was a purely mechanical one. We now employ the aid of chemicals in the form of water-softening materials, soaps, syndets, bluing, starch, stain-removers, etc., as well as motors to run the machine and do away with drudgery.

Materials

Nature's purifiers—sun, air, and water—stand first on the list of necessities for laundry work.

The sun's rays have wonderful properties, and on them we depend greatly for bleaching our clothes.

Water

Water is our chief dirt-carrier, and more depends upon the kind of water we have for laundry purposes than upon anything else. Soft water is best if it is clear and free from odours. Hard water may be either temporarily or permanently hard. If it is only temporarily hard, this is due to the presence of lime salt. Boiling often softens temporary hardness of water by depositing the lime salt in the form of limestone on the inside of the vessel. Thus we find many tea-kettles containing lime-deposits. Permanently hard water is, however, a more serious problem, and can be remedied only by the use of common substances called alkalies. The most common alkalies are:—(1) Washing-soda; (2) borax; (3) ammonia. Synthetic detergents, or syndets, as they are sometimes called, are now widely used to combat hard water, as they form a suds without producing a curd on the water. These are planned for different purposes, just like different soaps. It is wise to follow the directions on the package for their use.

1. Washing Soda

This is a cheap, but very effective, alkali for softening water. It is too strong for fine materials and removes the colour from coloured clothes, but is excellent for whitening white linens and cottons.

Rules for Using Washing-Soda

Dissolve 2 lb. of washing-soda in 1 qt. boiling water. Use from 2 to 4 tbsp. of the solution to 1 gal. of water. It is always wise to have washing-soda solution on hand. It should always be thoroughly dissolved, as the dry or wet crystals eat into fabrics.

2. Borax

Borax is a mild alkali. It is more expensive and not as effective for bleaching clothes. It is safer for fine fabrics, however, and may be used for softening the water for woollens, silks, and delicate materials. It is added before the soap. When the scum forms it is removed, and then soap is added.

3. Ammonia

Ammonia is another mild alkali and is inexpensive. It is better to use liquid ammonia than powdered ammonia. Ammonia should be used only when the operation of washing is to follow immediately, as it evaporates readily.

Detergents

A detergent is anything that will remove soil. Water may be classified as a detergent. However, chemical detergents may be divided into two general classes:

1. Soaps

Soap is the product of the chemical reaction of fats or oils with alkalies.

2. Syndets

Syndets are synthetic detergents produced from fats and oils or from the by-product of petroleum.

The disadvantages of soap, when used alone in hard water, is that a soap curd forms. Syndets do not form a curd, even in the hardest of water. Syndets are not really superior to soap in soil removal, but prevent the curd forming in hard water. The correct choice of soap or syndet is of greatest importance.

Every laundry should have two or more grades of detergents—

Mild detergents—for synthetic fibres, fine white cottons, linens and woollens.

All-purpose detergents—for general laundry or coarser materials.

Cold water detergents—for washing woollens.

Detergents in the powdered or liquid form are easy to use for the home laundry.

Some detergents contain brighteners, whitening agents, optical bleaches, or fluorescent dyes, which improve the general appearance of the clothes after repeated washings.

A chemical, which prevents soil from redepositing on clothes during washing, is added to certain detergents by the manufacturer.

General Rules for Washing

The home laundry used to consist of two large tubs installed in the corner of the basement. Washing machines were placed near the tubs. Laundry was carried downstairs to be washed, and carried upstairs again, to be hung outside to dry. Between tubs of washing, the homemaker had to climb the stairs if she wished to carry on with other household duties or to answer the telephone.

It is now considered more convenient to have the washing machine on the main floor—in the kitchen or in a utility room nearby. Wherever the laundry room is, it should be near the back door where the drying area is usually located. If a mechanical dryer is used, the location of the machine is considered in relation to the dryer.

Preparation for Washing

1. Sorting

Separate the white articles from the coloured. Many white sheets and pillow cases, as well as towels, are trimmed with colour, but, as these articles are mostly white, they are sorted with white things. Then separate this pile into the following groups:—

1. Lightly soiled things, as—sheets, pillow cases, etc.
2. Cotton underwear, night clothes, bath towels, etc.
3. The partly white and partly coloured articles.

It is advisable to sort first for amount of soil, rather than the fibre content. In combining white and coloured articles, consider colour fastness and the weight of the fabric. All of the articles should be similar in weight or construction, for it is not good practice to mix very sheer items in the same load as heavy ones.

It is important to remember that clothes washed before they become too soiled last longer and look better.

Coloured clothing may be sorted in one pile and then divided into groups in the same way.

If there is not more than one load of coloured things, this may not be necessary. However, do not wash heavily soiled work garments and extra heavy things, such as rugs, with lightly soiled articles.

In sorting, watch for spots and stains and remove these before the garments are washed. Hot water and soap tends to set stains. Pretreat streaks on neck and cuff bands of shirts, heavily soiled areas of children's clothing and work and play clothes.

"Pretreating" is done by rubbing on soap or synthetic detergent. Use a wet brush and dip it in whatever washing product is being used.

Mend rips and tears before washing; also. remove pins, clips and shoulder pads, close zippers and empty pockets. Check new garments for colour fastness. Unusually frail or delicate articles may need the protection provided by enclosing in a mesh bag or pillow case.

2. Washing

The procedure is much the same, whether clothes are washed by hand or machine. A washing machine saves time, spares strength and is easier on clothes. One of the chief advantages of washing by machine is that very hot water may be used.

Overnight soaking is not necessary. A short soaking in warm, soapy water accomplishes as much as a long one. However, the time for soaking is a matter of convenience. Ten minutes is considered to be sufficient time.

Different makes and models of washing machines vary in capacity. It is advisable to follow the manufacturers' directions. The directions will tell you how much water to use, will suggest the amount of soap and the correct

load of clothes. However, if you do not have these directions, the following suggestions will be helpful:—

Fill the washer to the water line with hot water, approximately 130° F. for white clothes; 110° F. for coloured. There is no great advantage to any higher temperature. The hand test for judging temperature is reasonably accurate. Most women can put their hands in water at 120° F., but, cannot keep their hands in the water at this temperature for any length of time. Water above this temperature is definitely too hot for the hands. A general rule for wash temperature would be—hot for white cotton and linens; warm for coloured cotton and linen, white or coloured wool, silk, the man-made fibres and blends.

Add a water softener, if necessary, then add soap to make suds—suds of two inches thick are advisable. If the suds do not hold up, add more soap, for cloths cannot be washed clean without plenty of active suds. Never put more clothes in the machine than will circulate and be moved about freely. A mixed load, consisting of two sheets and several smaller pieces, as—pillow cases, makes for better circulation of water than a full load of large pieces, as sheets.

Ten minutes is an average time for each load. If clothes are not very soiled, three loads can be washed satisfactorily in the same suds. If suds show signs of disappearing, it will be necessary to add more soap. However, as soon as the water becomes dark in colour, it should be changed. It is not possible to wash clothes clean in dirty water.

3. Rinsing

This step in the procedure is just as important as the washing in soap suds, because the rinse water flushes out both the remaining loose soil and lint. It is a good plan to give the clothes the final rinse in the washing machine. A second rinse is necessary and important, in clear, lukewarm or cool water. A third rinse is sometimes necessary, but is not always required for satisfactory results.

Bluing is sometimes added to the final rinse. Bluing does not whiten clothes, but corrects the yellow tinge, which sometimes occurs in poorly washed or old white articles. Coloured clothes need at least two clear water rinses, just as white clothes do.

4. Starching

The appearance and finish of some articles is improved by starching. Starched pieces, also, shed soil more readily. However, more fabrics are being made with finishes that are not readily removed with washing—so starching is not always necessary.

The amount of starch depends on personal taste, type of fabric, use of garment and other factors. A basic recipe, as below, may be followed as a guide or starting point in starching, but experience is the best guide and the only reliable method.

Recipe for Starch—

½ cup laundry starch.
Blend with 1 cup of cold water.
Add 2 quarts of boiling water, stirring constantly.
Cook slowly until clear and thick.

This makes a thick paste, which should be diluted before using. An equal quantity of warm water, or more, will be required.

A commercial liquid starch is now available, and many homemakers find it satisfactory. Detailed directions as to the amounts to use are given on the package or bottle.

5. Drying

Sun and air are good for white clothes. The sun acts as a natural bleach. Clothes should be hung in groups—shirts together, sheets together, underwear together. This saves a resorting when the clothes are removed from the line for folding and sprinkling.

When hanging the clothes, consider easy removal. Here are a few suggestions:—

Sort clothes in like kinds for hanging.

Shape each piece for easy handling.

Hang garments so that double thicknesses, as hems and seams, are exposed to the air.

Pin each piece for convenience in folding, when dry.

Keep clothespins within easy reach.

Shake before hanging to remove wrinkles.

Hang coloured clothes in a shady place, to prevent fading by the sun. If you have an automatic clothes dryer, follow the manufacturer's directions for best results.

6. Sprinkling or Dampening

Use warm water—it gives a more even dampness. Sprinkle as evenly as possible. A whisk or spray nozzle is helpful. All clothes should be well and evenly dampened, but not wet. After sprinkling, all articles should be rolled tightly, packed firmly into a basket and covered with a clean cloth until ironed. In cold weather clothes may be left dampened overnight, but in warm weather, the conditions for the growth of mildew are favourable.

A steam iron seldom eliminates all dampening or sprinkling. Lightly dampened linens and cottons iron more smoothly with a steam iron. If you use a steam iron, dampen clothes lightly for ironing.

Care of the Washing Machine

After each use, remove all lint from the washer.

Wash the interior with warm soap suds.

Rinse thoroughly with clear water. Dry.

Wash the wringer rolls with warm soap suds and rinse.

Loosen the tension on the wringer rolls.

Leave the washer cover slightly ajar between uses.

Follow the manufacturer's rules for oiling the motor and wringer.

The directions above are for the non-automatic washing machine. Follow the manufacturer's directions when using an automatic washer and dryer.

General Rules for Washing of Woollens

Wool is an animal fibre, possessing a scaly structure somewhat like a pine-cone or the scales of a fish. The scales on the wool fibre, when moist and warm, stand

up like the pine-cone, and when cold and dry, or cold and moist, lie flat. Careful handling in washing woollens is probably more important than for any other fibre. When improperly handled, the scales mat together, causing the garment to shrink. Also, the elasticity of wool is increased when wet. Thus the weight may cause a garment to sag badly, if hung to dry. This is the reason the weight of a wet sweater should be supported with the hands, when lifted.

1. Shake the garment well to remove dust.
2. Use a cold water detergent, prepared for woollens, or use a mild soap.
3. Wash as quickly as possible by kneading and squeezing, not rubbing. Never soak woollens.
4. Wash in a second water of the same temperature.
5. Rinse two or three times in clear water of the same temperature. This removes all the loosened soil and excess soap.
6. Press and squeeze out water. Do not wring. Place your left hand under the garment as you lift it from the water with the right. This will prevent stretching when wet. Wrap in a towel to remove the surplus moisture.
7. Pull into shape.
8. Dry fairly quickly, out-of-doors, if possible.

Hints for Washing Woollens

Never use very hot water. Lukewarm water is used, principally to protect colours.

Do not rub. Rubbing or pounding is the primary cause of shrinkage.

Do not soak or allow to stand wet for a long time. This will cause the fibres to mat.

Always use a mild soap. A strong, alkaline soap may spoil the colour or weaken the fibre.

Washing Sweaters

1. Measure the garment carefully before washing, particularly the length of the body and the sleeves. An easy way is to draw an outline of the garment on clean wrapping paper.
2. Follow general rules for washing woollens.
3. Wrap in a bath towel to remove surplus moisture.
4. To dry, shape it gently to match the measurements. Use rustproof pins to hold it in shape. Dry on a flat surface, in a warm place. Never dry on a radiator or close to high heat. Dry in the shade out-of-doors, or away from direct heat indoors.

(Woollen stockings or socks may be dried on a wooden or wire frame, to prevent shrinking. Follow the general rules for washing woollens.)

General Rules for Washing Silks, Rayons and Acetates

Informative labels, used by the manufacturers of fabrics, are your best guides as to the washability. Keep any washing instructions that come with a garment and follow them carefully.

1. Wash in warm, soft water, using soap solution or soap flakes. If necessary, use borax to soften the water.
2. Wash by kneading and squeezing. Never rub silks, rayons, or acetates, when washing them.

3. Rinse twice in clear, warm water.
4. If bluing is used, it should be used sparingly.
5. After rinsing, roll in a bath towel.
6. Iron on the wrong side. Do not use too hot an iron. Use the lowest heat for ironing acetates. Most rayons may be ironed at the same temperatures as cotton.

Several Rules for Washing Nylon

Most nylon materials are strong enough to go right into the washer. As nylon tends to absorb colour, it is preferable to wash white nylon with the first load of white wash. Coloured nylon may be washed with other light colours. To protect delicate nylons from severe agitation, they may be tied in a pillow case before being placed in the washer.

It is not always advisable to dry nylon fabrics in an automatic dryer. This may tend to set creases which are difficult to remove. Drip-drying is recommended by most manufacturers.

A Tip

Read the tags on the garments you buy. If they give washing or cleaning instructions, follow these carefully.

Washing Nylon Stockings

Before hanging stockings to dry, each foot and leg should be stretched into shape. If this is done, the back seam will dry straight, making it easier to keep it straight when wearing.

1. Make suds with neutral soap or syndet.
2. Turn the stockings wrong side out and squeeze the suds through and through, giving special attention to the feet. Do not rub or twist.
3. Rinse several times in clear, lukewarm water.
4. Squeeze as dry as possible. Do not wring.
5. Roll in a towel, pressing as you go to remove excess moisture. Unroll at once.
6. Carefully stretch into shape. Hang away from radiators or heat. Hang over a rod to dry.

Ironing

If you wish to avoid special care in ironing, buy garments that are cut on the grain of the cloth, that have simple, straight lines and little trimming.

The thermostatically controlled, light weight electric iron and the electric steam iron have helped to speed up the work of ironing and have made it easier for the worker. The following general rules may help you.

1. Start with the fabrics requiring low temperatures and work up to those needing high temperature. Use proper temperatures for ironing different fabrics.
2. Use the palms of the hands to smooth the material on the board and from the centre out.
3. Iron with straight strokes, following the thread of the material. This will help keep the threads in position and avoid stretching. Iron each section perfectly dry before beginning the next. Collars, cuffs, sleeves and other dangling parts of a garment are ironed first, then the flat sections of the garment.
4. Do not lean heavily on the iron, as this is tiring and is not necessary. The essential factor in ironing is the steady, even heat, not the pressure.
5. Hang all ironed pieces on a rack or rod to dry before storing.

6. Flat work, such as tablecloths:—Fold selvedge to selvedge, right side out. Iron first on one side and then on the other. Fold again lengthwise. Iron again on both sides. Fold to put away, but do not press crosswise creases. Avoid ironing unnecessarily sharp creases. Fibres that are continually bent and pressed with heat wear out faster.

A W-fold is preferred by some homemakers. A tablecloth, folded and ironed this way, is convenient to handle and store.

1. Fold lengthwise through centre, right side out.
2. Iron—then bring to the centre fold the right side of one half of the cloth.
3. Iron. Bring to the centre fold the right side of the other half. The cloth is now folded in quarters in the shape of a flat W.
4. Do not press crosswise folds in the cloth. Fold lightly for storing.

The Ironing and Folding of a Table-napkin

1. Place the napkin on the table, wrong side up, with the monogram or initial on the upper right-hand corner, and iron until dry.
2. Fold the lower edge almost to the upper edge and iron.
3. Fold the lower folded edge to the upper edge again and iron.
4. Fold the left side of the folded napkin almost to the right side and iron.

Care of Electric Irons

Electric irons may give many years of service with proper care.

THE FOLLOWING PRECAUTIONS SHOULD BE NOTED:—

Do not let the iron overheat.

Never let it fall. A fall may injure the outer surface, as well as harm some of the fine wire connections inside.

Remove the plug from the wall outlet first, instead of from the iron.

To clean an iron, apply a very fine abrasive, such as whiting, with a soft, clean cloth. Keep your iron clean. Wipe with a damp cloth and dry it thoroughly. Rub it over with waxed paper when slightly warm.

Stain Removal

Before washing, it is most necessary that all stains be removed, for sometimes the soap or even hot water will set a stain or make its removal impossible.

General Rules

1. Know the fibre of the material.
2. Determine what has caused the stain.
3. Use the type of stain remover that will remove the stain most effectively without injuring the material.

Classes of Stain Removers

1. Solvents, which will dissolve the stain, are—carbon tetrachloride, milk, commercial solvent, alcohol, ether.
2. Absorbents, which will absorb the stain, are—French chalk, talc, cornmeal, oatmeal, corn starch, blotting paper.
3. Bleaches, which remove the stain by bleaching it out, are—lemon juice, vinegar, oxalic acid, salts of lemon, ammonia, commercial bleaches. Bleaches may also

remove the colour from the material and should only be used if solvents or absorbents are ineffective.

NOTE.—Never use solvents, such as gasoline, benzine or naphtha, for spot removal at home. These are highly inflammable and are dangerous to use. Precaution should be taken, when using carbon tetrachloride, to keep the window open.

Gum

1. Scrape off excess with a dull knife.
2. Hold a piece of ice against the gum. This will make it easy to remove the bulk of the gum by scraping.
3. Sponge with a commercial solvent or carbon tetrachloride.
4. Press between two sheets of blotting paper with a hot iron, changing the paper frequently, until all marks from the gum are removed.

Lipstick

1. Washable materials may be sponged with carbon tetrachloride and washed with soap and water. Any remaining stain may be bleached out with chlorine bleach or hydrogen peroxide.
2. For non-washable materials, sponge with carbon tetrachloride.

Berry Stain

1. Spread the stained part over a bowl and pour boiling water over it, holding the tea-kettle spout at a height of about two feet above the stain, so as to strike the stain with force.
2. Plunge the stained part of the garment up and down in the hot water until the stain is removed.

Peach Stain

Peach stains are not easy to remove and one should be careful not to wipe hands covered with peach juice on a good napkin, towel, or apron.

Try the method used for removing berry stains first. If this does not remove the stain, use the following—

1. Stretch stain over a bowl of hot water and apply a bleach with a medicine dropper. Do not allow it to remain in contact with the stain more than a minute. If allowed to remain too long in contact with the fibres, a bleach solution will rot even cotton and linen.
2. Apply oxalic-acid solution to neutralize the alkali and rinse thoroughly in hot water. Several applications with immediate neutralization may be necessary for persistent stains.

Tea or Coffee Stain

(See Berry Stain above.)

Blood and Meat Juice

1. Never put into hot water, as this sets the stain. Soak in cold water or lukewarm water at once. Rub with soap and wash.
2. A paste of raw starch mixed with cold water will remove these stains on flannel, blankets, and heavy goods. Repeat until the stain disappears.

Egg Stain

1. Wash in cold water, then warm water and soap.

Cream, Chocolate, Cocoa

1. Same as egg.
2. If material cannot be washed, use a solvent such as benzene, gasoline, naphtha or carbon tetrachloride. Place the stained goods over a pad of cloth. Apply the solvent with a clean cloth. preferably the same colour as the material stained. Work from the edge of the stain to the centre. Change the underpad frequently.

Grease

Rub with lard or sponge with carbon tetrachloride, then launder if garment and material are washable. If garment cannot be laundered, sponge with carbon tetrachloride.

Bluing

1. Boil the stained material 20 minutes.
2. Add vinegar if a bleach is necessary.

Ink

Inks differ, so it may be necessary to try more than one method of removing.

1. Soak fresh stains in sour milk or buttermilk.
2. Potassium permanganate, used alternately with oxalic acid, will remove obstinate stains. It is a bleach and cannot be used on coloured materials or on silk or wool.
3. Launder in warm soapsuds.
4. Commercial ink remover is effective on white cotton and linen materials.

Indelible Pencil

1. Soak in alcohol and wash with water and soap.

Grass Stain

1. Wash at once with water and soap. Use a heavy suds.
2. For coloured materials sponge with alcohol or ether.

Iron Rust

1. Use salt, lemon juice, and sunlight.
2. Salts of lemon is an alternative.

Iodine

1. Soak or sponge with dilute ammonia solution.

Mildew

1. If stain is fresh, wash with cold water and soap. Dry in sun.
2. If stain is old, bleach with a commercial bleach in solution. Wash in hot water and place in the sun. Old stains are almost impossible to remove.

Paint or Varnish

1. If fresh, use warm water and soap.
2. If dry, sponge with turpentine.
3. Sponge delicate materials with carbon tetrachloride.

Perspiration

1. Use warm water, ammonia, and soap. Launder promptly.
2. Dry in the sun. If colour is gone, nothing can be done.

Scorch

1. If fibre is not injured, wash in soap suds, rinse in clear water and hang in the sun.

However, if the fabric is damaged, little can be done. A cloth, moistened in hydrogen peroxide, may take away some of the scorch.

QUESTIONS

1. Why should stains be removed before washing?
2. How may sugar-spots be removed from clothing? Grease-spots? Coffee-stains? Fruit-stains? Ink-stains?
3. How would you remove fruit-stains from table-napkins?
4. What temperature of water should be used for washing white cottons and linens?
5. Give the steps you would follow in doing the family washing.
6. What "nature-purifiers" are used in laundry-work?
7. How should nylon stockings be washed?
8. List three precautions necessary in washing woollens to prevent shrinkage.
9. What is the purpose of starching clothes? Give two reasons.
10. Give a recipe for making starch, and method of mixing.
11. What is meant by the term "syndets"?
12. What is the reason for sorting clothes when hanging to dry?
13. Why should coloured clothes not be hung in the sun?
14. Why do we sprinkle clothes?
15. Do you press your garments on the right or wrong side? Why?

BUDGETING

Do you dream about taking a trip, buying a camera, a record player, even a car? Do you long to take more responsibility in handling your own money, in buying your own clothes, in saving toward future education? Are you looking for ways in which you can contribute more to family happiness? You many think that there is no limit to the number of things you could do if you had more money. But more money won't help, unless you set goals for yourself and learn to manage the money you have in order to reach those goals.

Many people think managing money is a dull business because they plan only for "necessary" expenses, such as books, lunches, carfare. They fail to plan for out-of-pocket expenses like dates, hobbies, gifts, contributions to church and charity. A good spending plan makes room for emergencies, too. Spending without a plan can lead to worry over money problems, or to a feeling of never seeming to get or to do the things you want. Planning your spending can give you the satisfaction of reaching goals that are important to you.

No one is born with a ready-made ability to manage money well. No one automatically acquires the ability, just because he grows older. It takes skill to make an income of any size cover the things you want now and the things you will need in the future.

Set Your Own Goals

Unless you name specific goals, important to you, and include them in your budget, you may vaguely wish for a great many things, but never have the satisfaction of getting any of them. Use a form as suggested below to list some of the things you want soon, and some of the things you will want in the future.

YOUR GOALS

Wanted Soon	Wanted Later

Your list will show your personal tastes, talents, ambitions, and character. It won't be like any of your friend's lists because their needs and wishes are bound to be different from yours, just as the amount of money you and your friends have to spend will vary. Show your individuality! Set your own style of living and strike a balance between your income and your spending. You will achieve that balance not by accident but by making positive choices on how you will spend your money. When you know the big things you are aiming for, you can plan your spending to get them.

NOW is the ideal time to practice money management. Practice will not only make it possible for you to get the things you want today, but it will help you solve more complex problems when you go to college, join the armed forces, start a job, or get married. Nothing can give you greater self-confidence at all times than knowing how to manage your money affairs well.

Family budgets are the next step and are more detailed. The following is an outline of a form that may be used for the family. There are three sections in the budget outlined.

Paying for the present covers all current expenses of daily living.

Paying for the past means meeting bills for goods and services received and enjoyed but not as yet paid in full. These might include such things as the doctor's bills for a past illness, payments still due on a car or washing machine, or on a loan made when cash was urgently needed. Wiping out debts should be done as rapidly as possible without depriving the family of what they need for healthful living.

Paying for the future means getting ready to meet large bills coming due only occasionally and accumulating funds for special things. *Saving money* really means that you refrain from spending now in order to have something you want more later on.

The spend column is used to show the amount of money spent during the month. It is up to you to analyse these expenditures and make your plan.

The budget plan column is used to show the amount of money to be spent monthly to your best future advantage.

REMEMBER

The principle is always the same—"The outgo should not exceed the income."

The Steps—

1. Estimate income.
2. Estimate both the short and long term expenditures.
3. Revise the budget—if necessary.
4. Keep to budget—within reason!

How Much Will You Spend on Food?

Food budgets do not come ready made. There are many things which will influence the amount of money you will allow for your own food budget. Some of these are:

—The number in the family, their ages and activities.
—Your own shopping and cooking skill and knowledge of food-saving ways.
—Time, energy, and facilities available for shopping, storing, and preparing food.
—Food likes and dislikes.
—Number of meals eaten away from home by family members.
—Amount of entertaining done in your home.
—Differences in food prices due to city or rural location, types of stores, and seasons.
—Special diets of any member of the family; e.g., ulcer, diabetic.
—Whether or not you have a garden.

Budgeting the food dollar does not require complicated bookkeeping. It is often just a matter of keeping food bills for a week, a month or more. From these bills calculate the amount of money spent on the essential foods such as milk, fruit, vegetables, cereals, meat and meat alternates, and a Vitamin D preparation. Then add up the amount of money spent on such additional foods as cake, pastry, pickles, jam, soft drinks, tea, coffee, candies. If you have not been able to get enough of the amounts and kinds of the foods suggested in Canada's Food Rules, these are some things to consider. Can you shift from expensive to inexpensive foods in the same group—for example, powdered skim milk for part of the milk supply? Have you been spending too much on additional foods? Would it pay to do more home baking and canning? Could the marketing be done in a different place or in a different way?

Menu and Market Planning

Canada's Food Rules have been made to help you in your food selection. These rules are an excellent guide for planning your menus and market orders.

The groups of foods in Canada's Food Rules make a practical foundation for healthful meals. However, if meals are to be attractive and appetizing, the combination of foods from the different groups is very important. Check your menu planning with the following points in mind.

Variety of Food

The family will be better fed if they get a variety of foods. Take opportunities to try different vegetables, fruits, and cereals as they become available or are in season. How many different green vegetables have you used? Do you try different breads for sandwiches?

There are some foods, like bread, that you expect to have at every meal. Other foods, such as any one kind of fruit or vegetable, should not be repeated in one day. For instance, to serve apple juice, apple salad, and apple pie all in the same day shows lack of imagination.

Develop Interesting Flavour Combinations

Try combining bland and savoury foods but do not put too many strong-flavoured foods together. Use herbs, seasonings, and interesting combinations of food to make leftovers into tempting new dishes. Try chopped celery leaves in fish balls. Use vegetable water from green peas or beans with tomato juice to make a vegetable cocktail.

Remember to Have Good Colour Combinations

Bright vegetables, tomatoes, carrots, beets, bring life to colorless combinations such as white fish and mashed potatoes. Red peel left on apple slices adds interest to a Waldorf salad.

Look for Contrast in Textures

Smooth foods need the crispness of raw vegetables or fruit, or the crunchiness of nuts or dry bread crumbs. Raw cabbage salad does a lot for macaroni and cheese, and raw apple with peanut-butter sandwiches.

Plan to Include Economical Foods (as stretchers for more expensive items)

Some staple foods are always cheap because they are readily available and easy to store. Other foods are moderately priced depending on season, availability, and demand. Some forms of food are a luxury because their food value is not in relation to their cost. High price is not always an indication of good food value.

Combination of Foods for Meal Planning

These meals are planned to give good variety of food, flavour, colour and texture.

BREAKFAST

Tomato Juice
Rolled Oats
Whole-wheat Toast — Marmalade
Beverage

Orange
Bran Flakes
Rye Toast — Marmalade
Beverage

Vitaminized Apple Juice
Poached Egg
Whole-wheat Toast — Jam
Beverage

LUNCHES OR SUPPERS

Split-pea Soup
Jellied Perfection Salad
Whole-wheat Bread
Plum Trifle
Beverage

Toasted Cheese Sandwiches on
Whole-wheat Bread
Carrot Sticks — Celery
Fruit Cup
Beverage

Omelet with Spanish Sauce
Bran Muffins
Apple Sauce
Beverage

DINNERS

Liver and Onions
Baked Potatoes
Green Beans
Baked Lemon Sponge
Beverage

Meat Loaf
Scalloped Potatoes
Carrots
Rhubarb Crisp
Beverage

Spaghetti Casserole
Tossed Salad
Canned Plums
Rolled-oat Crackles
Beverage

Between-meal snacks are sometimes desirable. However, these snacks should not interfere with the family's regular meals. Raw fruits, dried fruits, fruit juice, tomato juice, milk, sandwiches, cookies, peanuts, are wise choices for snacks.

Planning Your Own Menu

How the foods needed during the day shall be combined into meals is a matter for each family to decide. However, the important thing is to make sure that all of the foods mentioned in Canada's Food Rules are included in the day's menu. Here is the way one family wrote down their own food pattern and planned a particular menu for one day.

GENERAL MENU PATTERN

Breakfast	Lunch or Supper	Dinner
Fruit or Fruit Juice	Main Dish	Meat or Alternate
Whole Grain Cereal	(Soup, Casserole,	Potato
Bread	Sandwiches)	Vegetable
Beverage	Vegetable	Dessert
	Bread	Beverage
	Dessert	
	Beverage	

Suggestions in Canada's Food Rules	Breakfast	Lunch or Supper	Dinner
Milk (for beverage and cooking)	X	X	X
Fruit:			
citrus fruit	X	—	—
Other fruit	—	X	—
Vegetables:			
Potatoes	—	—	X
Other vegetables	—	X	X
Cereals and bread:			
Whole-grain cereal	X	—	—
Bread	X	X	—
Meat or meat alternates	—	—	X
Eggs and cheese (each 3 times weekly)	—	X	—
Vitamin D preparation	X	—	—

In addition, other foods as needed.

SAMPLE MENU FOR ONE DAY

Breakfast	Lunch or Supper	Dinner
Vitaminized Apple Juice	Egg Sandwiches on	Meat Loaf
Rolled Oats	Whole-wheat Bread	Baked Potatoes
Whole-wheat Toast	Carrot Sticks	Turnips
Jam	Plums	Butterscotch Pudding
Milk — Coffee	Rolled-oat Cookies	Milk — Tea
	Milk — Tea	

Market Order

From your planned menus for the week:

1. Write down the foods you need.

2. Check the supply on hand.

3. Keep a scratch pad in a convenient spot in the kitchen to jot down items as your supply gets low. Then these reminders are ready when you make up the grocery list for your "big" shopping.

4. Decide, in your particular situation, what foods you can buy on a long term, weekly, and daily basis. For instance, if you have sufficient storage space, you may be able to buy non-perishable items such as skim milk powder, flour, sugar, and canned goods in sufficient quantities to last for a month or even several months. Long term buying will eliminate unnecessary trips to stores and frequent delivery charges. It also may be cheaper to buy some foods in larger quantities. The following will serve as an example of long term, weekly and daily buying:

Long Term Buying	Weekly or Bi-weekly	Daily
Flour	Meat	Fresh milk
Sugar	Fish	
Salt	Eggs	
Spices	Fresh fruits and vegetables	
Canned Goods	Bread	

Write down the quantities of food and sizes of canned goods. Make a note of brands or grades you prefer. This is especially helpful when other family members shop.

Refer to the section on "Buying Guide" to help you calculate the amount of each kind of food to purchase for the family.

Buying Guide

How much meat to buy for dinner? How many servings will come from a pound of fresh beans, a No. 2½ can, or a frozen package? You, as a food shopper with an eye to thrift and good management, learn to buy carefully just what you can use.

The figures below will help you decide how much to buy and, when reading market advertisements, you can use these figures to help decide what are real bargains.

The amount of meat, poultry, and fish per serving varies with the amount of extenders (such as stuffing, potatoes, rice) used with the meat.

MEAT

	Approximate Amount to Buy Per Serving
Much bone or gristle	½ — 1 lb.
Medium amounts of bone	1/3 — ½ lb.
Little bone	¼ — 1/3 lb.
No bone	1/5 — ¼ lb.

POULTRY (Dressed Weight)

Stewing	1/3 — ¾ lb.
Roasting	¾ — 1 lb.

FISH

Whole or round	½ — ¾ lb.
Dressed, large	½ lb.
Steaks, fillets	¼ — 1/3 lb.

FRESH VEGETABLES

	Servings Per lb.*
Beans, green	4
Beets, diced	4
Cabbage:	
Raw, shredded	7 — 8
Cooked	4 — 5
Carrots:	
Raw, shredded	8
Cooked	5
Onions, cooked	4
Peas, in pod	2
Potatoes	3 — 4
Spinach	3 — 4
Squash	2 — 3
Turnips	4
Dried beans (¾ c. serving)	8

* One-half cup per serving.

FRUIT

	Size of Serving	Servings Per lb.
Apricots	2 med.	5 — 6
Berries, raw	½ cup	4 — 5
Cherries, pitted cooked	½ cup	2
Plums	2 large	4
Rhubarb, cooked	½ cup	4
Prunes	4 med.	10 — 12

For apples, bananas, oranges, and pears, count on about 3 to a pound. Peaches, 4 to a pound. One pound of prunes makes 3 cups cooked.

CEREALS AND CEREAL PRODUCTS

	Size of Serving	Servings Per lb.
Flaked cereal	¾ cup	18 — 24
Puffed cereal	1 cup	32 — 38
Oatmeal, cooked	¾ cup	12
Macaroni, spaghetti, noodles, cooked	¾ cup	12 — 13
Rice, cooked	½ cup	16

One cup of uncooked rice gives 3 cups cooked.

CONTAINER SIZES FOR CANNED FRUITS AND VEGETABLES

Volume— (Fluid Ounces)	Cups	Servings	Vegetables, Fruits	Juices	Soups
10	1¼	2 — 3	X	X	X
15	1⅞	3 — 4	X	X	—
20	2½	4 — 5	X	X	—
28	3½	6 — 7	X	X	—
105	13	25 — 30	X	—	—

Common Foods From Which a Selection Can Be Made

A varied diet is the best guarantee of adequate nutrition. Therefore, when making up a market order, or planning meals, it is wise to select foods from each of the main food groups in Canada's Food Rules.

The following list gives an idea of the wide selection of foods which are available within each of the main food groups.

Milk:

whole — fluid, dried, evaporated
skim — fluid, dried

Fruit:

Citrus — orange, grapefruit, orange juice, and grapefruit juice
Tomatoes — fresh, canned, juice, or
Equivalents — vitaminized apple juice, cantaloupe, strawberries — in season
Others — any fresh, canned, dried, or frozen — e.g. apples, peaches, prunes, bananas, pears, apricots.

Vegetables:

Potatoes
Others — any fresh, frozen, or canned — e.g. turnip, carrot, peas, corn, cabbage, onions, beans.

Cereals and Bread:

WHOLE GRAIN CEREALS:
rolled oats
cracked wheat
rolled wheat
whole grain ready-to-eat breakfast cereals
unpolished rice
whole wheat flour
graham flour

REFINED CEREALS:
White flour
polished rice
macaroni
spaghetti
noodles
cornstarch
barley
cornmeal
tapioca

Breads:

whole wheat
cracked wheat
rye
white enriched

rolls
quick breads
crackers

Meats, Fish and Other Protein Foods:

beef, lamb
pork, veal
poultry
liver
heart
kidney
tongue

eggs — Grade A, B
cheese — Canadian, cottage
dried vegetables as:
navy beans, dried whole peas
split peas, lima beans
nuts — peanuts, peanut butter

Fats:

butter
fortified margarine
lard
shortening
salad oils

Sugars and Other Sweets:

sugar — white, brown
honey
syrups
molasses
assorted jams and jellies

NUTRITION

To get the best out of life, to look well and feel well, we need to choose and eat the right variety of foods.

We can obtain the variety of foods we need for good nutrition by following Canada's Food Rules, a simple guide to good eating for all ages:

CANADA'S FOOD RULES

These foods are good to eat — Eat them every day for health — Have at least three meals each day.

Milk:

Children (up to about 12 years) ..... at least 1 pint
Adolescents ..... at least 1½ pints
Adults ..... at least ½ pint

Fruit:

One serving of citrus fruit or tomatoes or their juices, and
One serving of other fruit.

Vegetables:

At least one serving of potatoes, and
at least two servings of other vegetables, preferably leafy green or yellow and frequently raw.

Cereals and Bread:

One serving of whole grain cereal, and
at least four slices of bread (with butter or fortified margarine).

Meat, Fish, etc.:

One serving of meat, fish, poultry, or meat alternates such as dried beans, eggs, and cheese. Use liver frequently. In addition EGGS and CHEESE at least three times a week each.

Vitamin D:

At least 400 International Units daily for all growing persons and expectant and nursing mothers.

Approved by the Canadian Council on Nutrition, 1950, Nutrition Division, Department of National Health and Welfare, Ottawa.

These foods are recommended because together they contain all the nutrients needed for health and are readily available and familiar to Canadian families. Remember that, although Canada's Food Rules are a particularly suitable guide for Canadian families, other combinations of foods may be used for good nutrition. For example, families from other countries will be accustomed to different com-

binations and types of foods and to differences in methods of food preparation than is customary in Canada.

Canada's Food Rules are a suitable daily food guide for all members of the family from the young child to the elderly person. The only variations necessary to meet the needs of different age groups is the form in which the food is served and the quantity. For example, the pre-school child requires the same variety of foods as other members of the family, although simply prepared and in small servings. Adolescent boys and girls, because this is a period of very rapid growth, will need larger quantities of the basic foods than during childhood. The expectant and nursing mother should plan her meals to include all of the foods recommended in Canada's Food Rules, both for her own health and that of her baby. She will require increased amounts of certain foods such as milk during this period. The elderly person will require less food than during his more active years. He may wish small servings of simple, easily digested foods. However, the basic foods recommended since childhood continue to form the framework of meals for the older person.

How do your daily meals measure up to Canada's Food Rules? The following score sheet for each day's meals will help you to evaluate your own food habits—

SCORE SHEET FOR EACH DAY'S MEALS

Food and Credits (The maximum score for each group is 20)	Your Score							Food Group Average
Milk—fluid milk (see 1), cheese (see 2), milk dishes (see 3) 20 Children: 3 cups....20; 2½ cups....15; 2 cups....10; 1 cup....5 Adolescents: 4 cups....20; 3 cups....15; 2 cups....10; 1 cup....5 Adults: 2 cups....20; 1½ cups....15; 1 cup....10; ½ cup....5								
Fruit (see 4) 20 1 serving of citrus fruit or tomatoes or their juices (see 5) ....15 1 or more servings of other fruit—fresh, canned, dried or frozen 5								
Vegetables (see 4) 20 3 or more servings (one should be potatoes) ....15 2 servings ....10 1 serving ....5 If one or more servings are green, leafy yellow or raw, extra ....5 Include fresh, canned, dried and frozen vegetables.								
Cereals, Bread (see 4) 20 1 or more servings of whole grain cereal 8 Bread (not more than 4 slices may be scored) ....8 Butter or fortified margarine 4								
Meat, Fish, Poultry or Meat Alternates (see 7) 20 1 or more servings of meat, fish, poultry or meat alternates such as eggs and cheese ....15 Extra for liver, heart or kidney ....5 Eggs (if not scored as meat alternate)....5 Cheese (if not scored as meat alternate or in milk group) 5								
Vitamin D Preparations—liquid, capsules, tablets or drops For Children and Adolescents 10								
Maximum Score— Adults .... 100 Children and Adolescents 110								

Average Score for Week.....

For Children and Adolescents
A score of 95 or over is very good.
A score of 80—94 is good.
A score below 80 is only fair, try to improve.

For Adults
A score of 85 or over is very good.
A score of 70—84 is good.
A score below 70 is only fair, try to improve.

Footnotes

1. A cup is an 8 fluid ounce measuring cup. A pint is 20 fluid ounces or 2½ cups.
2. Cheese, two one-inch cubes can be scored as ½ cup milk.
3. Milk dishes (cream soup, milk puddings) can be scored at ½ cup milk.
4. An average serving of vegetable, fruit or cereal is ½ cup. Servings will be smaller for children.
5. Vitaminized apple juice can be used in place of citrus fruit or tomatoes or their juices.
6. A nutritionally improved bread contains such foods as whole wheat, wheat germ, rye, dried milk, oatmeal, raisins, Vitamin B white flour (Canada Approved).
7. Meat alternates—2 eggs, 1 cup baked beans, three one-inch cubes of cheese.

Prepared by the Nutrition Division Department of National Health and Welfare, Ottawa. Revised 1950.

THE IMPORTANT FUNCTIONS OF FOOD

The food we eat provides fuel for heat and activity, material for building and repairing body tissues and substances to keep the body healthy and to regulate its processes.

A. Energy

Our bodies need fuel or energy to keep operating just as an engine needs gasoline or coal. When we work or play we use a good deal of energy. Even when we are resting or sleeping, body processes such as breathing and beating of the heart continue and energy is required.

The energy our bodies use is obtained from the food we eat. All foods have energy value, although some are better sources than others. The three sources of energy in food are carbohydrates (starches and sugars), fats and proteins. Foods that contain the largest amount of carbohydrates and fats are the most efficient sources of energy. The body will use protein as a source of energy if sufficient amounts of carbohydrates and fats are not eaten to meet energy requirements.

The energy value of foods is measured in calories. Just as length is measured in inches so energy is measured in calories. The number of calories we need each day depends on our age, size, and amount of work and activities. Teen-age girls and boys use as much energy as adults and frequently more. A girl sitting at an office desk can get along on fewer calories than a woman doing housework all day long. After about 25 years of age, we require less energy even for the same work.

When we eat more food than is needed to meet our energy requirements, the surplus is stored as fat. Therefore, a person who is overweight, is eating more food, that is more calories, than his body requires.

It has been suggested that we "Choose our calories by the company they keep". This is good advice since although foods such as candy, jam, cake and soft drinks will supply the calories our body requires, they contribute very little to our need for such nutrients as proteins, minerals and vitamins. The best way to obtain the calories we require is to eat a variety of foods such as those recommended in Canada's Food Rules.

B. Building and Repair

Proteins are the chief building and repair materials for body tissues. They are a part of every cell in the body. The main uses of the body for protein are:—

(1) For building new tissue, such as required during growth, after a wasting illness, and during pregnancy.

(2) For the up-keep and repair of tissues already built.

Both children and adults need proteins for the constant renewal and maintenance of body tissues.

Proteins are composed of units called amino acids. Proteins that furnish good amounts of all the essential amino acids are said to be of high value or complete. Examples of foods providing proteins of high value are milk, eggs, cheese, meat, fish, poultry and most nuts. Proteins that are lacking in one or more of the essential amino acids are called incomplete, for example, cereals, bread, legumes or other vegetables. When we eat a varied diet, such as the foods listed in Canada's Food Rules, the different protein-rich foods supplement each other, thus meeting all the needs of our body.

C. Protection and Regulations

Small amounts of certain elements found in food maintain the health of the body and regulate various body functions; these are minerals, vitamins, water and cellulose.

(1) *MINERALS*—The body requires about 14 minerals. They are needed for:

(i) Building materials for bones and teeth, hair, nails, and skin, muscles, nerve tissue and blood.

(ii) Body regulators to maintain the normal functioning of body fluids, muscles, nerves, clotting of blood and other processes.

Some of the minerals known to be of particular importance are calcium, phosphorus, iron and iodine.

Calcium and phosphorus are present in the body in larger amounts than all the rest of the minerals combined. This is because these two minerals make up a large proportion of the bones. Calcium is also necessary for the clotting of blood. Phosphorus is an essential part of every cell nucleus and of nerve tissue.

Milk and cheese and, to a much smaller extent, green leafy vegetables are the chief sources of calcium. Without milk or cheese in our daily meals it is extremely difficult to obtain sufficient calcium for body needs.

Phosphorus is present in many foods including milk, egg yolk, fish and cereals. It is rarely lacking in the diet.

Iron—is essential for the formation of haemoglobin in the red blood cells which carry oxygen from the lungs to all parts of the body. Iron is not the only food material needed for building blood, but blood cannot be formed without it. Women and children need more iron than men. A lack of iron usually results in anaemia. Good sources of iron are liver, kidney, heart, tongue, oysters, other meats, egg yolk, molasses, whole grain cereals, green vegetables, dried legumes and dried fruits.

Iodine in very small amounts helps prevent simple goitre. Iodine is found in salt water fish and all foods from districts where iodine is present in the water and soil. All table salt sold in Canada must be iodized and in the amounts ordinarily used will supply our need for iodine.

(2) *VITAMINS* are food substances needed to maintain health. The amounts of vitamins that we require can be obtained, so far as is known today, by eating a variety of common foods such as those listed in Canada's Food Rules. Some vitamins known to be of importance to health are Vitamin A, the B Vitamins, Vitamin C and Vitamin D. It is important to consider the various vitamins as

a group or team since they work together with other nutrients to assist with many body processes.

Vitamin A assists in keeping the body tissues healthy; it helps protect the eyes from night blindness, when this is of dietary origin, helps to keep the skin soft and smooth, and promotes growth. The best sources are liver, kidney, fish, liver oil, butter, vitamin-fortified margarine, green and yellow vegetables, yellow fruits, eggs, cream and whole milk.

B Vitamins—Of the nine or more B vitamins, the best known are: thiamine, riboflavin and niacin. They aid in promotion of growth, maintenance of appetite and good digestion. They are important for the proper use of energy foods in the body. They help to keep nerves, eyes and skin in healthy condition.

The best sources of thiamine are pork, heart, kidney, liver, legumes, whole grain cereals, enriched and whole grain bread, wheat germ and milk.

Riboflavin is found especially in liver, kidney, heart, other meats, milk and cheese.

The best sources of niacin are liver, heart, kidney, fish, other meats, peanuts, peanut butter, legumes, whole grain cereals, whole grain and enriched bread.

Vitamin C (ascorbic acid) helps to keep the walls of blood vessels intact and is required for the proper structure of the teeth and bones. Vitamin C prevents the development of a disease known as scurvy which results from an extreme lack of this vitamin in the diet. The best sources are citrus fruits and their juices, tomatoes and tomato juice, vitaminized apple juice, green and red peppers, broccoli, rose hips, raw strawberries, black currants, potatoes and a few raw vegetables such as turnips, cauliflower and cabbage.

Vitamin D is necessary for the proper use of calcium and phosphorus in the formation of bones and teeth. This vitamin is especially important for infants and all growing persons. Lack of Vitamin D during growth results in rickets, a disease in which growth is stunted and bones are soft and poorly developed.

Vitamin D comes from fish livers and is also made chemically. Limited quantities may be obtained from sunlight and certain foods such as salmon, sardines and evaporated milk or fresh milk to which vitamin D has been added.

However, food and sunlight may not be dependable daily sources for this vitamin. For this reason a vitamin D supplement in the form of fish liver oil, capsules or drops should be taken each day by all growing persons and expectant and nursing mothers.

WATER

Water is vital to the processes of digestion and elimination. Much of the water we require is provided by soup, milk and other beverages and foods. In addition to these sources we should drink enough water each day to satisfy our thirst.

CELLULOSE

Cellulose or roughage is the indigestible structural portion of vegetables, fruits and whole grain cereals. It is useful for keeping the digestive organs functioning properly by providing bulk.

SWEET FOODS

Such items as candy, soft drinks, jam and cakes are rich in sugar but contribute very little except calories to our food requirements. Since protein, minerals and

vitamins are not found in these foods in any quantity, they tend to satisfy the appetite without nourishing the body. It is now well proven that eating too much sweet food, especially between meals, encourages tooth decay. Sugar in contact with the teeth is changed into an acid by bacteria present in the mouth. The acid attacks the teeth. The harmful effect of the acid on the teeth follows within a few minutes after the sweet food is eaten. We should therefore clean our teeth or rinse our mouth with water immediately after each meal.

Instead of sweet foods for between meal snacks, it is much better to have such foods as nuts, fruit, fruit juice, raw vegetables and milk.

CHOOSE YOUR FOOD WISELY

We are fortunate to be living in an age when our food habits can be based on scientific knowledge rather than on superstitions and fads. However, even today, some people are so misled by fads and fallacies about food, that they deny themselves well planned daily meals. For example, the belief that food combinations such as milk and cherries are poisonous, that fish is a brain food, or that certain special foods will cure arthritis or cancer are fallacies rather than scientific facts. Remember that special or restricted diets should be prescribed only by your doctor. Your best guide to good eating is Canada's Food Rules. You will find that wise food selection according to this guide pays you dividends in health, appearance and vitality.

FOOD VALUE CHART

Carbohydrates	Fats	Proteins	Calcium	Phosphorus	Iron	VITAMINS		
						Vitamin A.	B Vitamins	Vitamin C.
Starches— bread cereals root vegetables macaroni spaghetti noodles potatoes *Sugars*— sugar candy honey molasses syrups jam jelly marmalade	lard cream butter fat meats shortening salad-dressing margarine vegetable oils nuts peanut-butter	milk eggs cheese meat fish poultry nuts legumes cereals bread	*Main Sources*— milk cheese *Secondary Sources*— green leafy vegetables canned salmon canned sardines	milk egg yolk fish cereals	liver kidney heart tongue oysters other meats egg yolk molasses whole grain cereals green vegetables dried fruits legumes	liver fish liver oil butter fortified margarine green and yellow vegetables eggs cream whole milk kidney yellow fruits	*Thiamine*— pork heart kidney liver legumes milk wheat germ whole grain cereals and bread enriched bread *Riboflavin*— liver kidney heart milk cheese other meats *Niacin*— liver heart kidney fish other meats peanuts legumes whole grain cereals and bread enriched bread	black currants citrus fruits tomatoes tomato juice vitaminized apple juice green and red peppers broccoli rose hips raw strawberries potatoes raw vegetables such as turnips cauliflower cabbage

NOTE.—The above chart provides a general guide only to some of the food sources of the various nutrients. For a more complete and accurate reference on this subject, an up-to-date nutrient value chart such as found in "Healthful Eating" should be consulted.

TABLE SETTING

A *cover* is the term used for linen, silver, glassware, and china placed on the table for the use of one person. A space, 24 inches wide and 15 inches deep, is the usual measurement allowed for one cover.

A tablecloth or place mats may be used.

Large damask cloths are usually kept for formal dinners. Mixtures of linen and rayon, or cotton and rayon, are used for tablecloths, more than pure linen.

A silence cloth is needed if a tablecloth is used.

Lace dinnercloths, with linen serviettes, are used without a silence cloth. These cloths are popular, as they are more easily cared for than the damask cloth.

Place mats may be of bamboo, raffia, cotton, linen, or lace. They are used in many homes because they are easily laundered. They should measure at least 14 x 20 inches. Oblong mats are better than round. It is sometimes necessary to use a pad under the place mat. The place mat is placed in line with the edge of the table.

General Rules for Table Setting

Laying Individual Covers

Allow 20-24 inches for each person.

At each cover place the silver 1 inch in from the edge of the table.

All silver should be perpendicular or horizontal to the edge of the table.

The kind and number of dishes and silverware will depend upon the menu.

The plate is placed in the centre of the cover.

The knife is placed at the right of the plate with the sharp edge turned toward the plate.

The soup spoon is placed at the right of the knife.

The fork is placed at the left of the plate, with tines up. If a knife is not necessary, omit it and change the fork to the right of the plate.

Additional pieces of silver are placed in order of use, with the piece to be used first on the outside.

The napkin is placed at the left of the fork with the open edge next to the fork.

The water glass is placed at the tip of the knife.

The bread and butter plate is placed at the top of the fork.

If butter spreaders are used, place them on the bread and butter plates with the edge of the blade towards the centre of the plate.

Use a set of salt and pepper shakers for every two people.

Arranging Additional Equipment

Breakfast—The beverage is served by the hostess. The coffee pot or tea pot is placed at the right of her cover, with the handle of the pot parallel to her silver. Cups and saucers are placed above her cover, singly or two together. A cup should not be placed on a table without a saucer under it. Cream and sugar should be placed to the right of the cups. These may be arranged on a tray, if desired.

A dish of marmalade or jelly should have a spoon placed beside it.

Lunch or Dinner—Space should be left above the host's cover for the platter of meat. A carving knife is placed at the right and the carving fork at the left. The placing of the vegetable dishes and gravy boat will depend upon how the

food is to be served. Place the spoons for serving the vegetables and a gravy ladle beside the dish containing the vegetables or gravy, or at the right of the person who is to serve them.

Pickles or relish will be served with a spoon or fork. This is laid on the table beside them.

A tray may be set with the cups and saucers, cream and sugar, ready for serving the coffee at the table.

Arrange the chairs so that the edge of the seat is on the same line as the overhanging cloth.

In placing food on the table, observe the art principle of balance; e.g., the meat course in front of the host will balance the vegetables in front of the hostess.

Have the covers on opposite sides of the table within parallel lines.

Table Decorations

Centrepieces of candles and flowers or a bowl of fruit make a centre of interest for the table.

Decorations should be simple and economical.

Flowers with heavy perfume should be avoided.

Table centrepieces should be low, not more than 10 inches above the table so they will not obstruct the view across the table.

Table Service

There are three ways of serving meals—the Russian style, the English style, and the Family style.

In the Russian style only flowers, silver, and china are placed on the table at the beginning of the meal. The several courses are served from the left side, each person helping himself when the dishes are passed; or the plates are served in the kitchen and placed before each guest. This style is best adapted to serving large numbers. A modified form of this service would be to bring in the plates from the kitchen already served.

The English style of serving is used at small dinner-parties or with the family. The host carves and serves the meat and gravy and the hostess serves the soup, vegetables, salad, dessert and coffee. The served dishes may be passed to each guest by the maid or member of the family, or they may be passed from one person to another.

The Family style is a combination of both English and Russian styles, some of the courses being served from the kitchen and some from the table. Frequently the soup and dessert are served from the kitchen, while the main course is served from the table. This type of service is most frequently used in Canadian homes for family meals.

Buffet Style Meals

This is a pleasant and informal way to entertain at meal-time. The meal may be centred around the dining room table, a buffet or tea wagon. Each person serves himself, then finds a chair in another part of the room or in an adjoining room. Sometimes card tables are set up for use or nests of tables are used. The menu must consist of food that is easy to eat with a fork or spoon.

There is no formal table setting. Because the guests help themselves to food, everything is laid out in logical sequence for easy service, such as dinner plates, main dish, relishes, breads, napkins and silverware.

Right-hand or Left-hand Service

There are two methods of serving guests at the table, which are recognized as correct—namely, the *right-hand* and *left-hand* service. In using the *right-hand* service all dishes are placed and removed from the *right,* with the exception of dishes that admit of choice. In the *left-hand* service all dishes are placed and removed from the *left,* with the exception of beverages.

Rules for Serving

1. Warm all dishes used for hot foods and chill all dishes used for cold foods.
2. Fill water-tumblers three-quarters full, just before guests sit down. Refill the glasses when needed.
3. Place butter on butter-plates just before guests are seated. Replenish when necessary.
4. Cut the bread just before serving, so that it will not dry out. Hot breads should be covered with a clean folded napkin or linen square to keep them hot.
5. Have all dishes for each course ready for serving.
6. Teach boys as well as girls to wait on the table correctly and to take their turn at serving, so that mother is relieved of that duty. Mother is the hostess and her place is at the table.
7. The hostess assigns each guest to his or her chair at the table. The lady guest of honour is placed at the right of the host, the gentleman guest of honour at the right of the hostess. A guest remains standing at the back of her chair until the hostess is seated and then sits down from the left-hand side of her chair.
8. Serve the hostess or the lady guest of honour first and the others in order of sitting. All ladies may be served first if desired. This method requires more passing.
9. *In clearing the table remove the food first; then remove the soiled plates, beginning with the hostess or the lady guest of honour. Salts and peppers are removed last.*
10. Remove everything pertaining to one course first before serving the next.
11. Use a folded napkin or small tray to crumb the table, if crumbing is desired.
12. Never reach in front of a guest.
13. If you are acting as waitress rise quietly, leaving napkin partially folded at the left-hand side of cover. Do not place napkin on the chair.
14. In serving afternoon tea, pass the cup and saucer so that the handle is facing the guest. The teaspoon should be placed on the right-hand side of the cup parallel to the handle.
15. If cream and sugar are passed on a tray, the handle of the cream-pitcher should face the guest.

Common Rules of Table Etiquette

1. Stress personal neatness and cleanliness.
2. Sit erect with feet on the floor and elbows away from the table.
3. Eat slowly and quietly.
4. Do not play with utensils on the table.
5. Drink quietly from the side of the spoon, never from the tip. In filling the spoon dip it away from you.
6. A spoon when not in use should be placed on the saucer.

7. When finished with food served in a sherbet-glass, the spoon is left on the plate, not in the sherbet-glass.

8. Handle a drinking-glass near the base.

9. Do not break crackers or bread into the soup.

10. Do not butter a whole slice of bread at one time; break off a small portion and butter it.

11. When finished dinner, place knife and fork side by side on the plate, slightly to the right. The prongs of the fork should be turned up.

12. Talk about cheerful and pleasant things.

13. Do not criticize the food.

14. Toothpicks, like other toilet articles, should be used in private.

15. Good manners are based on consideration for others.

QUESTIONS—Table Service

1. Name six rules for table manners.

2. What should be placed under a table-cloth? Why?

3. How far from the edge of the table should silver be placed?

4. What is the position of the blade of the knife on the table?

5. Which is preferable, coarse table-linen which is well laundered, or fine table-linen poorly laundered?

6. What is the position of spoons on the table?

7. Give directions for clearing the dinner-table.

8. How should the teaspoon be placed on the saucer when serving afternoon tea?

9. What is the position of the tumbler on the table?

10. Where should the open edge of the napkin be?

11. How close to the table should the chairs be?

12. Is it correct to serve either from the left or right? Give rules in regard to each method.

13. Discuss the following habits: Leaving a spoon in the cup; breaking crackers into soup; handling a drinking-glass with the fingers inside the glass; reaching in front of a guest.

14. Name four types of meal service.

15. What are the values derived from learning accepted ways of entertainment?

16. What factors determine the menu and the means of serving, when you entertain?

17. When is buffet service desirable?

FOOD PREPARATION

Personal Cleanliness

1. A wash-dress or a dress well covered with an apron is to be preferred.

2. The hair should be pinned back or covered with a hair-net, so that no hairs may fall into the food while cooking.

3. The hands should be thoroughly washed with soap and water before beginning to cook.

4. When cooking, wash the hands whenever they become sticky or soiled, or after touching the hair or pocket-handkerchief.

Rules for Working

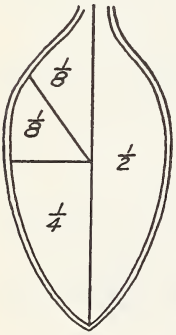
1. Read recipe carefully; follow directions accurately.

2. Plan work so as to save time and labour.

3. Economize in the use of dishes, by measuring dry materials first, then liquids.

4. Never taste food from a mixing-spoon. Pour food from the mixing-spoon into the tasting-spoon.

Measurements



Accurate measurements are necessary to success in cooking. All measurements should be level.

1. In measuring dry materials, fill the measure and level off with the straight edge of a knife.

2. When one-half of a spoonful is desired, divide the material lengthwise of the spoon, and scrape out one-half; for one-fourth of a spoonful, divide crosswise the remaining half. Sets of measuring spoons are more accurate.

3. In measuring flour, sift once before measuring, and lift into the cup with a tablespoon. Do not pack.

4. In measuring a half-cup of fat, half-fill the cup with water, and add sufficient fat to bring the water to the one-cup line. A set of standard measuring cups may be used for half, third or quarter cup measures.

5. A standard 8-ounce measuring cup, with lip for pouring, is used for accurate measuring of liquids.

Table of Abbreviations

For the sake of convenience in cookery, the abbreviations used throughout this text are:—

tsp. for teaspoonful.
tbsp. for tablespoonful.
c. for cupful.
pt. for pint.
qt. for quart.
gal. for gallon.
lb. for pound.
oz. for ounce.
f.g. for few grains.
min. for minute.
hr. for hour.

Table of Measures

3 tsp	= 1 tbsp	
16 tbsp	= 1 cup	
1 cup	= 8 ounces	
2½ cups	= 1 pint Canadian Standard Measure	
2 pints	= 1 quart	
1 quart wine measure	= 32 ounces.	
1 quart Canadian Standard Measure	= 40 ounces	
4 quarts	= 1 gallon	
8 quarts	= 1 peck	
4 cups flour (sifted once)	= 1 pound	
2½ cups cornmeal	= 1 pound	
3½ cups whole wheat flour	= 1 pound	
1¾ cups rice	= 1 pound	
5½ cups rolled oats	= 1 pound	
3 cups macaroni	= 1 pound	
2 cups granulated sugar	= 1 pound	
2 2/3 cups brown sugar	= 1 pound	
2¾ cups icing sugar	= 1 pound	
50 - 70 sugar lumps	= 1 pound	
3 - 4 cups prunes	= 1 pound	
2¼ cups dates	= 1 pound	
4 cups walnuts	= 1 pound	
5 cups cocoanut	= 1 pound	
3 cups raisins	= 1 pound	
4 cups grated cheese	= 1 pound	
4½ cups cocoa	= 1 pound	
3 tablespoons cocoa	= 1 square chocolate	
1 square baking chocolate	= 1 ounce	
juice of one lemon	= 3 tablespoons	
1 cup uncooked rice	= 3 cups cooked rice	
1 cup cream	= 3 cups whipped cream	
8-10 egg whites	= 1 cup	

CANADIAN STANDARD MEASURE IS USED THROUGHOUT CANADA.

The following substitutions may be made in recipes, if you do not have the exact ingredients—

1 cup sour milk	— Use 2 tbsp. vinegar or lemon juice with sweet milk to make 1 cup.
1 cup sweet milk	— Use 3 to 4 tbsp. of powdered milk and 1 cup water.
1 cup pastry flour	— Use ⅞ c. all-purpose flour and 2 tbsp. corn-starch.
1 ounce or 1 square of chocolate	— Use 3 tbsp. cocoa and ¾ tbsp. fat.
1 cup granulated sugar	— Use 1 c. brown sugar packed.
1 tablespoon flour in thickening	— Use ½ tbsp. corn-starch *or* 1 tbsp. granular tapioca.

BEVERAGES

Water

Water and milk are the two most important beverages. We need from 4—6 glasses of water per day.

Boiling-point of Water

In heating water the temperature gradually rises.

1. First we see tiny bubbles coming up from the bottom. These are merely air-bubbles. Air is dissolved in the water and, when heated, the air expands and comes to the surface.

2. Water that is "lukewarm" feels neither hot nor cold. Use a thermometer to find the temperature. A practical test is to place a drop on the wrist.

3. When big steam bubbles begin to rise but break on the surface and disappear, the water is "simmering." Find the temperature.

4. Water is boiling when it reaches the temperature of 212° F. at sea-level. Steam bubbles come up so large and so rapidly that the surface of the water is no longer level. At this stage we say the water is at a "full rolling boil."

Milk

Milk is one of our most important foods. When we drink milk we should remember that we are taking a real food and not merely something to take the place of water.

Milk is an excellent source of calcium, riboflavin and protein. It, also, supplies some Vitamin A and thiamin, as well as other vitamins and minerals.

Without milk and cheese in our daily meals, it is very difficult to meet the body's requirement for calcium.

Canada's Food Rules recommend the following amount of milk each day:—

Children (up to about 12 years)—at least 1 pint.
Adolescents — at least 1½ pints.
Adults — at least ½ pint.

Pasteurized Milk

All the milk we drink should be pasteurized to ensure that it is free from bacteria, which may cause disease. Pasteurized milk has been heated to a temperature high enough to destroy all disease producing bacteria that might be present, then cooled quickly.

Types of Milk

1. *Plain and homogenized whole milk* are equal in food value. Homogenized milk may seem richer because the fat is suspended evenly through the milk by a special process in British Columbia. By law, in British Columbia, milk must contain at least 3.25 per cent butter fat.

2. *Skim milk* has most of the butter-fat removed. It contains the same valuable nutrients as whole milk with the exception of less fat and Vitamin A.

3. *Buttermilk* is the fluid left after the manufacture of butter so it contains very litle fat. It is, also, made by adding a culture to skim milk. Buttermilk provides the same valuable nutrients as skim milk.

4. *Evaporated milk* is canned whole milk which has half the water removed. This product usually has Vitamin D added and contains this information on the label.

5. *Condensed milk* is evaporated milk with sugar added to it.

6. *Powdered milk* (whole or skim) has nearly all the moisture removed. It can be restored to the fluid form by the addition of water according to the instructions on the label.

Care of Milk

When milk is delivered to your doorstep, it should be taken immediately to the refrigerator or coolest place in your home. If you cannot store the milk as soon as it arrives, provide a box, so that the milkman may leave the bottle in a shaded place. Sunlight promotes spoilage and destroys some of the food value of milk.

Keep milk stored in the refrigerator or a cooler, except when in use.

Wash the top and lid of the milk bottle before opening.

Milk Has Many Uses

In addition to its use as a daily beverage, milk may be used in soups, cream sauces, in scalloped and creamed dishes, in puddings and baked foods such as bread, cakes and muffins.

Milk is, also, used in making ice cream, cottage cheese and all other types of cheese.

Sour milk or cream may be used in many recipes for cakes, muffins, cookies, and main dishes.

TEA

As far as we know, tea was discovered about 2000 B.C. in China. Most of the tea we use comes from China, Japan, Ceylon, and India. Tea is made from the leaves of a plant called Thea. The plant sends out four sets of new shoots a year, and the leaves from these shoots are gathered and cured for tea.

There are two types of tea—black and green tea. They can both be made from the same shrubs, the main difference being the black tea is fermented and green tea is not. During this fermenting process the leaves wither and turn dark before being dried. This process gives black tea a flavour different from that of green tea.

Green tea is made by drying the tea-leaves at a high temperature, which causes them to keep their green colour and curl up.

Tea contains a substance called "theine," which acts as a stimulant to the nerves. There is also present tannin, which is bad for digestion.

Tea itself has no food value. It is a mild stimulant, and is used largely because it removes the sense of fatigue. Poor tea, or tea taken in excess, produces indigestion and sleeplessness. Growing children require no stimulants, and their growth is best promoted without tea. When tea is taken, usually the amount of milk drunk is reduced.

When boiling water is poured over the tea-leaves and allowed to stand for three minutes it extracts the theine or stimulant and the oil which gives the pleasing flavour. Boiling the tea, or steeping it too long, draws out the tannin. This destroys the flavour and produces a hindering effect on digestion.

TEA

1 tsp. tea. 1 c. boiling water.

1. Scald teapot; let stand till thoroughly heated.
2. Put in the tea; add the water required.
3. Let stand in a hot place to infuse 3 min.
4. Pour tea from leaves into a freshly scalded teapot and serve.

NOTE.—The water for tea should be fresh and freshly boiled.

ICED TEA

1. Make tea; when infused, strain from leaves.
2. Sweeten, if desired.
3. Pour into glasses one-third full of chipped ice.
4. Serve with slice of lemon.

TEA (for 50 People)

½ lb. tea. 2½ gals. boiling water.
1 qt. cream.

1. If a large quantity is to be made at once, tie tea loosely in a cheesecloth bag and drop into boiling water.
2. Remove at the end of 3 min.

COCOA AND CHOCOLATE

Cocoa and chocolate are made from the pod of the cacao-tree grown in tropical countries. The pod is shaped somewhat like a cucumber and inside are a large number of seeds surrounded by pulp. The seeds are removed from the pulp, and after being allowed to ferment for a few days they are roasted. The husk is then removed and the seed is divided into two parts called "cocoa-nibs."

When cocoa-nibs are ground and pressed into a cake, the cake is known as chocolate. This chocolate is rather bitter to the taste and is used in cookery. When sugar is added to the cake it is called "sweet" chocolate.

Cocoa is made from chocolate by removing a large part of the fat. It is then ground and sold in bulk or in tin containers. The fat that is removed is called cocoa butter. Cocoa butter is used in confectionery and in the making of toilet preparations. Cocoa as a beverage has more food value than tea or coffee.

Cocoa is a very good beverage for children, since it is one way of introducing milk into their meals. It is a mild stimulant due to the theobromine present in it.

Chocolate contains more fat than cocoa, and this makes it more difficult to digest.

COCOA

1 tbsp. cocoa. 1 c. water.
1—2 tbsp. sugar. 1 c . milk.
f.g. salt. ¼ tsp. vanilla.

1. Using the top of the double-boiler mix cocoa, sugar, and salt, and add boiling water; mix thoroughly.
2. Boil gently 5 min. to cook the starch.
3. Add cold milk and heat over hot water.
4. Beat until a thick froth forms, to prevent a scum; add vanilla if desired.
5. A marshmallow or a little whipped cream adds to the attractiveness.
6. Serve *hot.*

(For 50 People)

½ lb. cocoa.
¾—1 lb. sugar
3 qt. water.
5—6 qt. milk.
1 tsp. salt.
4 tsp. vanilla.

CHOCOLATE

1½ oz. unsweetened chocolate. (1½ squares).
3—4 tbsp. sugar.
f.g. salt.
1 c. boiling water.
3 c. milk.

1. Melt chocolate over hot water.
2. Add sugar, salt, and boiling water; stir until smooth; boil 5 min.
3. Add hot milk; reheat over boiling water.
4. Beat to form froth; serve with whipped cream or a marshmallow.

COFFEE

The coffee-shrub is an evergreen plant that grows from 4 to 6 feet high under cultivation in all tropical countries. The coffee bean or berry is the seed of a fruit resembling a cherry. The cherry-like fruit is allowed to ferment so that the pulp surrounding the seeds may become soft and can be removed. Two of these beans are contained in a berry and grow with their flat sides together and are enclosed in a husk. The husk has to be dried and removed to allow the beans to fall apart.

The coffee-beans are then shipped to the country where they are to be sold. The beans are roasted to make them brittle and to develop the flavour. The housekeeper may prefer to buy the coffee in this form and grind it as needed, as coffee loses its flavour and aroma very quickly after being ground if it is left in an open container. Ground coffee should be sold in air-tight cans, but if sent from the store in paper sacks it should be emptied into air-tight cans at once.

Coffee contains a stimulating substance called caffeine, which is the same thing as theine in tea. It also contains tannin, and volatile oils which give to coffee its characteristic odour and flavour.

Coffee itself has no food value; it stimulates the nerves, brain, and heart, and the tannin hinders digestion. It is usually made stronger than tea, and therefore has a greater stimulating effect. Children need no stimulants; therefore they should avoid coffee as well as tea.

Freshly ground coffee gives the best results. Buy good, freshly roasted coffee-beans and grind just before using; or buy ground coffee in small quantity and keep in an air-tight container. Coffee should be served immediately after making.

BOILED COFFEE (WITH BOILING WATER)

1—1½ tbsp. coarsely ground coffee.
f.g. salt.
Egg-white and shell may be added if desired.
3 tbsp. cold water.
¾ c. boiling water.

1. Mix coffee, salt, egg-white and shell; add cold water; mix.
2. Turn into scalded pot; add boiling water. Fill spout with soft paper.
3. Boil very gently 3 to 5 min.; set back on stove.
4. Pour out a little coffee to clear the spout; return it to the coffee-pot; let stand 3 min. to settle.

NOTE.—A tbsp. of cold water should be used to settle grounds where an egg-white is not used.

BOILED COFFEE (WITH COLD WATER)

1. Proportions: Same as above.
2. Mix coffee and egg (if used) and full amount of water.
3. Bring to a boil and boil for 1 min.
4. Treat the same as when made with boiling water.

NOTE.—This method is simple and is generally used for making coffee in large quantities at picnics and parties.

PERCOLATED COFFEE

1—1½ tbsp. finely ground coffee. f.g. salt.
1 c. boiling water.

1. Scald percolator; put in coffee and salt.
2. Add boiling water; percolate 5—8 min.
3. Serve with cream or hot milk.

COFFEE (BY INFUSION)

1 Proportions: Same as above.
2. Coffee must be finely ground.
3. Use enamel or porcelain coffee-pot.
4. Scald pot.
5. Add coffee and boiling water.
6. Steep for 2 min.
7. Filter or add cold water to settle.
8. Serve at once.

NOTE.—This gives a coffee of a very delicate flavour.

LEMONADE (for 10-12 People)

1½ c. sugar.
1 c. water.
Rind of 1 lemon (thin shavings).
Juice of 6 lemons.

1. Make syrup of water, sugar, and lemon-rind.
2. Boil 5 min.; cool.
3. Add lemon-juice; strain; dilute with cold water to taste—about 2 tbsp. syrup to 1 glass.

FRUIT PUNCH

1 c. orange-juice.
½ c. lemon-juice.
½ tbsp. grated lemon-rind.
½ tbsp. grated orange-rind.
¾ to 1 c. sugar.
1 qt. boiling water.

1. Boil sugar, water, and fruit-rind 5 min.
2. Cool; add fruit-juices, strain and chill.
3. Dilute with iced water.

Variations

1. Add 2 c. fruit-juice—raspberry, strawberry, cherry, grape, pineapple, loganberry; crushed fruit may also be added.
2. Add 1 qt. grape-juice.
3. Add 1 qt. ginger ale, or 1 pt. of ginger ale and 1 pt. grape-juice.

RASPBERRY VINEGAR

3 pt. raspberries. 1 pt. cider vinegar.
1 lb. sugar to 1 pt. juice.

1. Pick over berries and cover with vinegar.
2. Allow to stand overnight.
3. Strain fruit and liquid through wet jelly-bag.
4. Add sugar and boil 15 min.
5. Pour into hot sterilized bottles.
6. Cork and seal.
7. When serving pour ¼ c. into a glass and fill with iced water.

QUESTIONS

Water

1. How much water should one drink per day?
2. Why does the body need water in plentiful supply?
3. What directions would you give for the drinking of water at meal-time?
4. How can you tell when water is boiling?
5. Can you get water any hotter than boiling?
6. What are the uses of water in the body?
7. What liquid is used in making most beverages?
8. What percentage of the body is water?
9. Is impure water ever clear and sparkling in appearance?
10. Where does your water-supply come from?
11. What should we do with water before drinking it if there is the slightest doubt as to its purity?
12. What effect on the stomach has ice-water?
13. What are the dangers of the "public drinking-cup"?

Coffee

1. Where does most of our coffee come from?
2. Why are the coffee-beans fermented before roasting?
3. Why should coffee be kept in a closed container?
4. Give ways of making coffee.
5. Why do we add egg-shell or egg-white to coffee when making it?

Tea

1. Why are tea and coffee injurious?
2. Name two kinds of tea.
3. Where does most of our tea come from?
4. What is the stimulant found in tea?
5. What is the difference between green and black tea?
6. How long should we steep tea?

Cocoa

1. From what source do we get cocoa?
2. Give the method of making cocoa.
3. Is cocoa made from skim-milk as nourishing as that made from whole milk? Why?
4. What is the difference between cocoa and chocolate?

Milk

1. What is the proper method of caring for milk in the home?
2. Why do you think it is very necessary to have clean milk?
3. Does clean milk cost more than unclean milk? Why?
4. What is pasteurized milk?
5. Who is responsible for keeping the milk clean after it leaves the dairy?
6. What is the price of milk per qt.? Per pt.?
7. What is the price of 1 pt. of cream?
8. What is condensed milk?
9. What does it cost per can?
10. Is milk a valuable food? Why?
11. For what food may milk be substituted?
12. How could *you* use 1 qt. milk each day?
13. What are the proteins found in milk?
14. Should your family increase its use of milk? Give reasons for your answer.
15. In what ways may milk be used for breakfast?
16. Why is milk considered so necessary, especially for babies and growing children?
17. How does milk-sugar compare with granulated sugar?

FRUITS

Canada's Food Rules recommend including one service of citrus fruit or tomatoes, or their juices, everyday, and one serving of other fruit.

There are several important reasons why we should eat fruit every day.

Fresh, raw fruits are one of the best sources of Vitamin C. The citrus fruits, such as oranges or grapefruit, or their juices, are very popular, but are not the only source of Vitamin C. Tomatoes, especially sun-ripened field tomatoes, are rich in Vitamin C. A large part of the apple juice sold in Canada is vitaminized, which means that Vitamin C has been added.

Some fruits are important for the iron content. Iron helps in developing haemoglobin, the colouring matter in the blood. There is a small amount of calcium in fruits such as oranges, grapefruit and figs.

Cellulose is the woody fibre found in fruit and vegetables. This helps to prevent constipation, as it acts as a laxative.

Fruits also contain acids and water, which regulate the body; for example, the banana, which seems so solid, is 75% water.

In addition to its value in keeping the body in good condition, fruit has some fuel value. This fuel is largely carbohydrate in the form of sugar.

The colour, texture and flavour of fruit help to stimulate the appetite.

The Use of Fresh Fruits

We are fortunate to live in a country that produces a great variety of fruits. In all probability fruit will be higher-priced in winter and many people will think that they cannot afford to use it. If fresh fruit is too expensive, dried or canned fruit may be substituted.

Fruits are at their best when thoroughly ripe, and ripe fruit only should be eaten raw. In the ripening process the starch in the fruit is changed to sugar, the amount of acid decreases, and the fibre is softened. The cooking of unripe fruit does practically what the sun does in the ripening process.

All fresh fruits should be thoroughly washed to remove harmful spores and the dust.

Classification of Fruits

1. *Fresh Fruits*—valuable for all reasons given above.
2. *Dried Fruits*—have a higher percentage of sugar and satisfy the craving for sweets. They contain valuable mineral salts. Dates and raisins may be added to cereals. Less sugar should be used when these are added.

GENERAL RULES FOR COOKING

A. Fresh Fruit

1. Wash, peel, and cut in pieces, or wash and cook whole.
2. Add a small amount of water to keep from burning.
3. Cover and cook gently until tender.
4. Add sugar to sweeten and cook a minute longer.

B. Dried Fruit

Method I:

1. Wash thoroughly.
2. Soak in enough cold water to cover for several hours, or overnight, or pour hot water over the fruit using 4 cups per pound of fruit.
3. Cover and cook slowly until tender, in the water in which fruit has been soaked. When the fruit is done, it will appear lustrous and plump.
4. Add sugar and lemon-juice.
5. Simmer 5 minutes longer.
6. Cool and serve.

Method II

1. Wash thoroughly.
2. Cover with cold water and bring to the boil in the top part of a double boiler.
3. Boil gently for 5 minutes.
4. Place over boiling water and cook very slowly for 1 hour. Add sugar if desired.

NOTE: Dried fruit may be cooked in pressure cooker.

APPLE SAUCE

6 tart apples.
½ c. water.
½ c. sugar.
1 tbsp. lemon-juice, or
Small piece of lemon-rind, *or*
½ tsp. nutmeg, *or*
½ tsp. cinnamon, *or*
6 whole cloves.

See general rules for cooking fresh fruit.

NOTE.—Apples may be cooked in their skins and then pressed through a sieve.

RHUBARB SAUCE

3 c. rhubarb.
¾ to 1 c. sugar.

See general rules for cooking fresh fruit.

Stewed peaches, gooseberries, etc., are cooked in the same way.

APPLE COMPOTE

8 apples.
1 c. sugar.
1½ c. water.
Thin shavings of lemon-rind.
1 tbsp. lemon-juice.

1. Wipe, quarter, core, and pare apples; cut in eighths.
2. Make syrup of sugar, water, lemon-rind; boil 5 min.
3. Remove rind; put in half of apples, or enough to cover the surface of the syrup.
4. Cover; cook slowly until clear; lift out carefully on serving-dish.
5. Cook remaining apples; add lemon-juice to syrup and strain over apples.

NOTE.—*Coddled Apples* are prepared as above, leaving the apples whole. The centres may be filled with jelly.

BLUSHING APPLES

1. Select red apples of medium size; wipe, core, and peel, leaving a band about ¾ in. wide around the centre of the apple.
2. Prepare syrup, adding some of the red peelings, and cook apples in it as for Coddled Apples.
3. Lift apples out when soft; pour strained syrup over apples.
4. Serve with whipped cream, if desired.

BAKED APPLES

1. Wipe, core, and score apples; place in baking-dish.
2. Fill each centre with sugar; add ½ tbsp. lemon-juice or ¼ tsp. cinnamon for flavouring.
3. Dates, raisins, nuts, or peanut butter may be placed in the centre of apples for variation.
4. A small piece of butter may be placed on each apple.
5. Pour the water around the apples, 2/3 c. to 6 apples, or until the water is 1 inch deep around the apples.
6. Bake in a moderate oven till soft, 30 to 45 min; baste every 10 min.
7. Lift out on serving-dish; pour the juice over the apples.
8. Serve hot or cold, with or without cream.

APPLE SNOW

2 c. strained apples.
1 egg-white.

1. Stew sour apples until tender. Sweeten to taste and rub through a sieve. (These should make 2 c.)
2. Beat egg-white stiff and gradually beat the apples into it. Beat again until quite stiff.
3. Serve with Custard Sauce.

STEAMED APPLE PUDDING

4–6 sour apples.
1 c. flour.
1/3 c. sugar.
2 tsp. baking powder.
¼ tsp. salt.
2 tbsp. butter.
½ c. milk.

1. Wipe, quarter, core, pare, and slice the apples.
2. Place in a buttered baking-dish, sprinkle with sugar, and steam until nearly tender.

3. Mix remaining ingredients as in Baking-powder Biscuits.
4. Pour over apples. Cover and steam 25-35 min. longer.
5. Turn on a hot plate, with the apples on the top.
6. Serve with sugar and cream or Lemon Sauce.

APPLE DUMPLINGS

6 apples.
6 tbsp. sugar.
Nutmeg or cinnamon.
2 c. flour.
4 tsp. baking-powder.
½ tsp. salt.
¼ c. fat.
2/3 c. milk.

1. Mix and sift the flour, baking-powder, and salt.
2. Rub in the shortening. Add the milk.
3. Roll out the dough like biscuit-dough, making six thin sheets.
4. In the centre of each piece of dough place an apple which has been peeled and cored.
5. Fill the centre hole with sugar and sprinkle with spice.
6. Draw the dough up around the apple and moisten the edges.
7. Press them into place.
8. Bake or steam the dumplings until the apples are tender.

APPLE CRISP

8—10 apples.
¼ c. sugar.
Cinnamon.
¼ c. butter.
¾ c. brown sugar.
1/3 c. flour.

1. Peel the apples and slice them into thin slices.
2. Pile into a buttered baking-dish and continue until the dish is almost full.
3. Sprinkle with the ¼ c. sugar (white or brown) and the cinnamon.
4. Prepare crumbs for the top by creaming together the butter, sugar, and flour.
5. When this mixture is worked together so that it resembles fine bread-crumbs, pat it on top of the apples.
6. Bake about 20 min. or until the apples are soft and the top is golden brown.

CRUNCHY APPLE CRUST

Cream—
¼ c. fat.
1 c. brown sugar

Stir in—
¾ c. Rolled Oats.
dash of salt.
dash of cinnamon.
¼ c. flour.

Sprinkle over 2 cups of apple sauce. Bake 30 minutes in moderate oven (375°).

STEWED PRUNES

½ lb. prunes.
2½ c. cold water.
¼ c. sugar.
1 tbsp. lemon-juice.

Cook according to general rules for Dried Fruit.

Note.—Evaporated or dried apples, peaches or apricots may be treated similarly.

FRUIT-WHIPS

1 c. fruit pulp, prune, apricot, banana, apple sauce, grated apple, or crushed berries.
¼ c. sugar.
2 egg-whites.
Lemon-juice, if desired.

1. Beat egg-whites stiff but not dry.
2. Add gradually 2 tbsp. sugar to each egg-white, and beat until dissolved.
3. Add lemon-juice to fruit-pulp.
4. Fold pulp into whites.
5. Pile lightly in a serving-dish.
6. Chill and serve.
7. Custard sauce may be made from the yolks.

NOTE.—Prune-whip may be turned into a buttered baking-dish and baked in a slow oven until set—about 20 min.

WAYS OF PREPARING ORANGES AND GRAPEFRUIT

Method I

1. Wipe orange or grapefruit and cut in half crosswise.
2. With a very sharp-pointed knife separate the pulp from the skin around the entire circumference.
3. Separate sections and remove pithy centre.
4. Serve on a plate.

Method II

1. Peel orange carefully, and slice thinly with a very sharp knife.
2. Arrange attractively on plate for serving.

Method III

1. Squeeze orange, using lemon-squeezer.
2. Chill and serve in a glass.

FRUIT COCKTAIL (for 6 People)

1 grapefruit.
1 orange.
¼ c. pineapple-juice.
1 banana.
2 slices pineapple.
2 tbsp. sugar.

1. Remove pulp from grapefruit and orange, removing tough cellulose.
2. Cut banana in desired shapes.
3. Add juice and pineapple cut in cubes.
4. Sprinkle with sugar and chill thoroughly.
5. Serve in sherbet-glasses, fruit-dishes, or grapefruit or orange cases, and garnish with a cherry. Fill glasses ½ to 2/3 full.
6. Place on small plate, preferably on a doily.

BAKED BANANAS

6 bananas.
1 tbsp. butter.
2 tbsp. lemon-juice.
1/3 c. sugar.
½ c. water.

1. Remove skins from bananas, cut in halves lengthwise, and place in a shallow granite pan.
2. Make syrup of sugar and water. Add lemon-juice and butter.
3. Pour ½ syrup over bananas.
4. Bake in a slow oven 20 min., basting with remaining syrup.

QUESTIONS

1. What valuable foodstuffs do we wish to obtain when we eat fruit?
2. Why should raw fruits be washed before serving?
3. What place or places on the menu would you give fresh fruit? Dried fruit?
4. Which foodstuff found in fruit contributes to its laxative quality?
5. Does one get the same kind of fuel in fruit that one gets in potatoes?
6. Where does the greatest percentage of our fruit come from?
7. What change takes place in the starch of fruit during the ripening process?
8. Why is sugar added to stewed fruit after it has been softened by boiling?
9. What effect does cooking have on under-ripe fruits?
10. What is meant by purchasing fruit "in season"?
11. What fruits are in season at the present time?
12. What does a serving of grapefruit cost?
13. What causes fruit to spoil?

CEREALS

Cereals form one of our chief sources of carbohydrates. Those which contain the bran, such as rolled oats and wheat-flakes, are much richer in mineral salts, vitamins, and cellulose than those which do not, such as cream of wheat and polished rice. The cellulose in cereals is tougher and coarser than that in fruits, and different cereals vary in the quantity and coarseness of this fibre. For this reason the various cereals require different lengths of time for cooking.

Cereals are one of the best and least expensive sources of food energy. Most cereals are sold in three forms:—

1. Pre-cooked, such as ready-to-eat breakfast cereals. These are the most expensive.
2. Quick-cooking, or partially cooked cereals, such as rolled oats.
3. Uncooked cereal.

Hot, cooked cereals are best for growing children. It is advisable to serve a home cooked cereal daily. However, prepared cereals, introduced occasionally, give a pleasing variety to the breakfast.

Cereals are divided into two general classes, coarse cereals and fine cereals, depending on the method of manufacture.

Coarse Cereals—Rolled Oats, flaked wheat, flaked barley.

Fine Cereals—Wheat, farina, corn-meal.

The reasons for cooking cereals are:—

1. To soften the cellulose.
2. To burst the starch-grains and to cook thoroughly.
3. To improve the flavour.

GENERAL DIRECTIONS FOR COOKING CEREALS

Cereal	Water	Salt	Time
1 c. quick cooking	2-3 c.	1 tsp.	5-15 min.
1 c. coarse	3 c.	1 tsp.	1 hour
1 c. fine	4-5 c.	1½ tsp.	45 min.

1. Have water boiling in upper part of double boiler; add salt.
2. Add cereal slowly, especially in the case of fine cereal.
3. Cook 5 min. over direct heat, then finish over boiling water.

BOILED RICE

1 c. rice. 2 tsp. salt.
8 c. water.

1. Pick over and wash the rice.
2. Have water boiling briskly; add salt.
3. Add rice slowly in order not to check the boiling.
4. Boil, uncovered, until soft—about 25 min.
5. Drain in a sieve and pour boiling water through to rinse the starch paste from the rice-grains.

NOTE.—Test rice by tasting, or by pressing a kernel between the fingers.

Rice expands 3 to 4 times its bulk during cooking. It is sold as polished, unpolished and wild rice. The unpolished or brown rice contains good amounts of thiamine.

Quick Cooking Rice—Follow directions on the package for best results.

DOUBLE-BOILER COOKED RICE

3 c. boiling water. 1 tsp. salt.
1 c. rice.

1. Fill the lower part of the double boiler one-third full of boiling water.
2. In the top part of the double boiler put 3 c. of boiling water and 1 tsp. salt.
3. Place this part of double boiler directly over the flame.
4. When the water boils, slowly add the cereal, stirring the mixture. Keep on stirring and cook the cereal for 10 min.
5. Place the top part of the double boiler over the lower part. Set the lower part over the flame.
6. Cover the top part. Let the rice cook in the double boiler until it is tender. For white rice this usually requires about 45 min.; for brown rice, 1½ hours. The time for cooking brown rice may be shortened if it is soaked in water before cooking.

QUESTIONS

1. What is our chief source of carbohydrates?
2. Which cereals are richest in mineral salts, vitamins, and cellulose?
3. What two classes of cereals have we?
4. How does the class affect the preparation of the cereal?
5. Why should we eat bread and breakfast foods made from whole grains?
6. Which would you consider it better to serve as a general rule?
7. Under what circumstances would you think it better to have the other?
8. Why do cereals when cooked require little or no sugar?
9. Give three reasons for cooking cereals?
10. What form of carbohydrates is found in cereals?
11. From what country do we get rice?
12. In what part of the grain is the most mineral matter found? Cellulose?
13. How do cereals rank as food?
14. Is the protein of cereals as good as that found in milk, eggs, meat?
15. Compare the prices of rolled oats, cream of wheat, corn-flakes, and shredded wheat.
16. Where are the grain- or cereal-producing areas of the world?

SOUPS

There are two main types of soups:—

1. Soups made with meat stock, thickened or cleared.
2. Soups made with milk or vegetable stock and thickened, such as cream soup and chowder.

The cleared soups, made with meat stock, are usually highly seasoned and stimulating to the appetite. They are used as appetizers. Thickened stock soup may be served as a main dish. Cream soups and other thickened soups, such as chowder, are used as the main dish at lunch or supper.

Cream soups have a white sauce foundation. The proportions to use are usually two parts of thin white sauce to one part of cooked vegetables. As white sauce is used as a basis for many recipes, one should know the recipe and method perfectly. It is time-consuming to have to refer to the recipe each time it is to be used.

STANDARD PROPORTIONS FOR WHITE SAUCE

Sauce	Liquid	Thickening	Fat	Seasoning	Uses
No. 1, thin.	1 c.	1 tbsp.	1 tbsp.	½ tsp. salt	Cream soup, toast.
No. 2, medium	1 c.	2 tbsp.	2 tbsp.	½ tsp. salt	Creamed vegetables, pudding sauces.
No. 3, thick.	1 c.	3 tbsp.	2 tbsp.		Salad dressing.
No. 4, very thick.	1 c.	4 tbsp.	2½-3 tbsp.	½ tsp. salt	Croquettes, soufflés.

Note.—The amount of fat may be reduced by one-half if desired. With a limited amount of fat Method II gives the best results. The *fat* may be butter or any butter substitute. The *liquid* may be milk, vegetable stock, or a mixture of both. Tomato Sauce may be similarly made, using tomato-juice or a mixture of tomato and meat stock as liquid. To make *gravy*, follow the same method as for a medium sauce.

Melted Fat Method

1. Measure flour, salt and pepper into the top of the double boiler, or a heavy saucepan. Keep the ingredients on the side near the handle.
2. Measure the fat into the opposite side of the pan.
3. Place the edge of the pan with the fat over the direct heat until the fat melts.
4. Stir in the dry ingredients. Be careful not to scorch.
5. Remove from the heat.
6. Add the cold milk, slowly, stirring until smooth. If more than one cup of milk is used, it is wise to heat all but one cup of liquid in order to save time.

Stir over low heat, or in double boiler, until thick.

Cover and let cook 10-15 minutes.

Cold Liquid Method

1. Mix flour with enough cold milk to make a smooth paste.
2. Add enough milk to make mixture pour.
3. Add to heated milk.
4. Bring to boil, stirring constantly.
5. Cook over hot water 10 minutes; add fat.

NOTE.—Mono sodium glutamate, sometimes listed in recipes as M.S.G., helps to bring out the flavour in white sauce and soups.

CREAM OF TOMATO SOUP

3 c. canned or cooked tomatoes.
1 slice onion (if desired).
¼ c. celery-leaves and stems or celery salt.
1½ tsp. salt.
⅛ tsp. pepper.
3 tbsp. flour.
3 tbsp. butter.
3 c. milk.

1. Cook first five ingredients (covered, to prevent evaporation and loss of vitamins) for 5 min.
2. Press tomatoes through a strainer if desired.
3. Combine flour, seasoning, and fat, as for making white sauce, but add the strained tomatoes instead of milk.
4. Pour cold milk into a saucepan. Slowly add tomato sauce to the milk, stirring only enough to mix the ingredients.
5. Heat the mixture until it boils—no longer.

NOTE.—To prevent curdling, be sure to use *fresh* milk and heat the mixture of tomato sauce and milk *only until the boiling-point is reached.*

TOMATO STOCK SOUP

Variation

1. Use 4 c. tomatoes.
2. Add a few peppercorns and a bay-leaf.
3. Follow above recipe (substituting water or stock for the 3 c. milk).

CREAM OF PEA SOUP

1 pt. can of peas.
1 pt. cold water.
1 tsp. sugar.
2 c. thin white sauce.

1. Heat the peas in the water.
2. Press through a coarse sieve; add sugar.

3. Combine with thin white sauce made according to general rules.

Cream of Corn Soup is made in the same proportions and in the same way as Cream of Pea Soup. A little onion improves the flavour.

CREAM OF CELERY SOUP

1½ c. celery.	2 c. thin white sauce.
3 c. water.	Onion-juice if desired.

1. Cook celery in boiling water until soft.
2. Press through a coarse sieve (there should be a pint of stock and pulp).
3. Add to thin white sauce.
4. Serve *hot.*

NOTE.—Outer stalks and green leaves or dried celery-leaves (1 tbsp. to 1 c. boiling water) may be used instead of fresh celery.

Cream of Carrot Soup is made in the same proportions as Cream of Celery Soup.

CREAM OF POTATO SOUP

1½ c. hot riced potatoes or 1 c. mashed.	¼ tsp. celery salt.
2 c. potato stock or 2 c. milk.	1 tsp. chopped parsley.
1 small onion.	2 c. thin white sauce.

1. Scald milk with the onion and add slowly to potatoes.
2. Add thin white sauce and celery salt.
3. Strain and add parsley.
4. Serve *hot.*

VEGETABLE SOUP

½ c. cubed carrots.	1½ qt. water.
½ c. cubed turnips.	¼ c. butter or dripping.
½ c. cubed celery.	½ tsp. parsley.
1 c. cubed potatoes.	½ tsp. salt.
½ c. chopped onions.	¼ tsp. pepper.

1. Cook all vegetables except potatoes in the fat 10 min. or until lightly browned.
2. Add potatoes and cook 2 min. longer.
3. Add water; simmer 1 hr. and add parsley and seasonings. Add water to keep the amount of liquid 1 qt.
4. Serve *hot.*

MEAT STOCK SOUP

2 lb. meat and bone.	4 cloves.
6 c. cold water.	6 peppercorns.
1 small onion.	1 bay-leaf.
½ c. carrots.	1 tsp. mixed sweet herbs.
½ c. turnips.	1 spray parsley.
2 stalks celery.	1 tsp. salt.

1. Soak the bones and half the meat in cold water 1 hr.
2. Cut remaining meat into small pieces; roll in flour; brown in a little fat in hot frying-pan .
3. Add to bones and water and cook below boiling-point for 2 hr.
4. Add vegetables and seasonings and cook 1½ hr. longer .
5. Serve *hot.*

PEA, BEAN, OR LENTIL SOUP

1 c. dried peas (split).
8 c. water.
1 carrot.
1 large onion.
1 tbsp. fat. } or ham-bone.
1 c. milk. }
2 tbsp. chopped parsley.
1 tsp. salt.
⅛ tsp. pepper.

Method

1. Wash peas and cover with water. Stand overnight.
2. Put on to boil along with the bone, if it is used, and cook 2 hr.
3. Wash, peel, and chop onion. Cut up carrot and add to soup along with the fat. Boil ½ hour longer.
4. Add salt and pepper and parsley. If milk is used, warm and add it, too. Do not boil again. Serve with croutons.

CORN CHOWDER

¼ c. finely cut bacon or salt pork.
1 tbsp. finely cut onion.
1 c. milk.
½ c. chopped celery.
½ c. chopped carrot.
1 can (No. 1) corn—cream style.
1 tsp. salt.
⅛ tsp. pepper

1. Cook the bacon in a large frying pan for 1 or 2 minutes.
2. Add onion and cook until golden brown, stirring two or three times.
3. Add milk, chopped vegetables and corn to the bacon mixture.
4. Add seasonings and continue to cook until the vegetables are tender.

NOTE.—Chowders are a cream soup variation in which sea food or coarsely cut vegetables are added.

SOUP ACCOMPANIMENTS

Crisp Crackers

1. Place crackers on baking-sheet; bake until lightly browned.

Cheese Wafers

1. Place wafers on baking-sheet; sprinkle with grated cheese. Paprika may be added.
2. Bake until cheese is melted.

Croutons

1. Cut slices of stale bread ½ inch thick; cut into cubes.
2. Place in baking-pan and brown in a hot oven.

Soup Sticks

1. Cut stale bread into ½-inch slices; remove crusts.
2. Cut into strips ½ inch wide and 2½ inches long.
3. Brown in a hot oven.

QUESTIONS

1. Why is the tomato added to the white sauce instead of the white sauce poured into the tomato?
2. Which has the higher food value, cream or stock soup?
3. Are soups easy or difficult of digestion?

4. Name two ways of preventing lumps in making a white sauce.
5. What are the standard proportions for a sauce for vegetables?
6. Name three uses for a white sauce.
7. What is the foundation of all cream soups?
8. When you have more flour than fat, which method of mixing a white sauce is the better?
9. In making a soup from a soup-bone, what is the first step?
10. Which is the cheaper, cream of tomato soup or cream of potato soup?

VEGETABLES

The term "vegetable" includes a large class of foods which are used in great quantities in our diet. Vegetables of many kinds can now be had at all seasons of the year, because the canned and dried vegetables, like the fresh ones, can be shipped successfully from one part of the country to another. In large city markets a great variety of fresh vegetables can be bought even in midwinter. Hothouse and imported vegetables are expensive and in many cases they are not of good flavour.

Vegetables are important in the diet because they furnish a large share of the mineral matter needed by the body. They supply carbohydrates in the form of starch and sugar, and also supply roughage or bulk in the diet. There are vitamins in many vegetables, especially in the leafy vegetable.

Vegetables are similar to fruit in that they are good health insurance.

1. Vegetables are valuable as laxatives. All vegetables contain cellulose or woody fibre, to which their laxative quality is chiefly due.

2. Vegetables are important sources of minerals, such as iron, phosphorus, and calcium. Since the diet is likely to be deficient in these minerals it should include a liberal supply of vegetables.

3. Vegetables are important sources of Vitamins A, B, and C.

CLASSIFICATION OF VEGETABLES

1. According to the Part of the Plant Used

(a) Leaf—Lettuce, cabbage, brussels sprouts, spinach, dandelion greens, endive.
(b) Flower—Cauliflower, broccoli, French artichokes.
(c) Fruit—Tomato, eggplant, pepper, string beans, squash, marrow, cucumber.
(d) Seed—Peas, beans, corn.
(e) Root—Beet, turnip, parsnip, carrot, radish.
(f) Stalk—Celery, chard, asparagus.
(g) Tuber—Potato, sweet potato.
(h) Bulb—Onion, leek.

2. According to Composition

(a) Green Vegetables—sometimes called "watery vegetables." This includes all juicy vegetables such as tomatoes, asparagus, cabbage, lettuce, parsley, cucumbers, celery, chard. Green vegetables contain a high percentage of water, minerals and vitamins, but little or no starch or protein. Green celery, green asparagus, and green lettuce-leaves are richer in Vitamin A than are the leaves that are bleached.

(b) Starchy vegetables. These vegetables contain an important quantity of starch and some protein. To this group belong potatoes, corn, parsnips, carrots, sweet potatoes, onions, turnips.

(c) Legumes. These contain more protein than the other vegetables and include such plants as peas, beans, lentils.

3. According to Flavour

(a) Mild-flavoured vegetables, including carrots, lettuce, potatoes, beans, celery.

(b) Strong-flavoured vegetables, including cabbage, onions, green peppers, and cauliflowers.

VEGETABLE COOKERY

"Cover with water and boil until tender" is no longer the standard method of cooking vegetables. All too often the vegetable-water is drained into the sink, carrying with it fine flavour, valuable minerals, and vitamins which have cooked out of the vegetables. To avoid this loss, vegetables should be cooked in a tightly covered saucepan with a small amount of water, or steamed or baked in an oven. By a "small amount of water" is meant, usually, about ½ cup. If the pan is large, sufficient water should be added just to cover the bottom. Some vegetables, such as onions, cabbage, asparagus, etc., need special cooking. *(See* General Rules.)

Just cover the bottom of the saucepan which is to be used with boiling water. Then add the vegetables, which have been prepared in the usual way. Cover the saucepan with a tight-fitting cover and place the vegetables over a full heat. As soon as the steam is noticeable, lower the heat enough to keep the water still boiling, and continue cooking until the vegetables are tender. While cooking, the lid should not be lifted to allow the steam to escape. Vegetables should be cooked until they are just tender and no more. Turn them into a serving dish and season as desired. Any water left in the saucepan may be used in gravy, boiled off, or used in making a sauce.

Long cooking tends to rob vegetables of their bright colours. Everything must be done to shorten the cooking as much as possible. Thus, by having the water at a full, rolling boil when vegetables are put into it, and by keeping it boiling during the entire cooking period, considerable time is saved.

Of all the vegetables served, those that are most frequently poorly cooked are cabbage, brussels sprouts, cauliflower, turnips, and onions. Not only do they have a disagreeable flavour and a strong odour, but they take on an unappetizing brownish colour as well. Overcooking is usually responsible for these results.

GENERAL RULES

1. Cook summer vegetables as soon after gathering as possible.

2. Keep vegetables in a cool, dry place. Remove all withered or dried leaves and tops before putting the vegetables away.

3. Select medium-sized vegetables and wash carefully.

4. Wash carefully; pare or scrape, if skins must be removed. Pare onions under cold water. If cooked in the skins, cut tops of beets 1 inch from the root. Young beets may be peeled, sliced, and cooked in a small amount of water, which should be absorbed when beets are tender.

5. Do not prepare vegetables and then allow them to stand for some time in cold water. Such a practice increases the loss of sugar, minerals, and vitamins.

6. Have the water at a full, rolling boil. The length of the cooking period principally affects the loss of vitamins. The time necessary for cooking is decreased materially by starting the vegetables to cook in boiling, not cold, water. Add the vegetables and salt (about 1 tsp. salt to a serving of vegetables for a family of six). Salt helps to retain the colour of green vegetables and improves the flavour and texture of all. Do not add soda.

7. Drain vegetables as soon as tender and serve at once. Overcooking is responsible for more undesirable flavours and faded, unattractive colours in vegetables than is any other one thing.

8. Baking or steaming is advised, when possible, as these methods conserve mineral salts.

9. *Buttering*—Use 1 1/3 tbsp. of butter per 2 cups of cooked vegetable, except for Irish potatoes and Hubbard squash, which are mashed.

10. *Creaming*—Allow ½ cup white sauce for 2-cup portion of vegetable. For peas use ¾ cup.

Combinations of Vegetables

Always try to use a colourful vegetable with a white one.

Choose vegetables that are pleasing with the flavour of the meat or other food to be served with the vegetable.

When serving 2 or 3 vegetables choose a variety of shapes.

A contrast in texture is important. Do not serve all crisp or all soft.

Cooking Canned Vegetables

1. Pour the liquid off the vegetable into a saucepan.
2. Heat until the liquid has been reduced to ½ the original volume.
3. Add vegetables and heat to boiling point. All home canned vegetables except tomatoes must be boiled in an open saucepan 15 minutes before using.

Cooking Frozen Vegetables

Follow the directions given on the packages of the commercially frozen vegetables.

VEGETABLE COOKERY TIME-TABLE

(From the Canadian Cook Book — by permission of The Ryerson Press, Toronto)

Kind of Vegetable	Preparation	Cooking Time in Minutes						Amount for 6	Serving Suggestions
		Boil	Boil frozen and thawed	Steam	Pressure Cook	Pan Saute	Bake 350°		
Mild Flavoured									
Artichokes— Jerusalem	Clean and scrape. To boil add ½ teaspoon vinegar to cooking water.	20-30		30-40	10			2½ pounds	Serve with butter, salt and pepper or Vegetable or Cheese Sauce.
Asparagus	Wash, cut off the tough ends; to boil, tie in bunches and stand up in deep pot with water half way up stalks.	15-20	5	30-40	9			1 pound	Serve with Vegetable or Cream Sauce; or on toast with Cheese Sauce.
Beans—Wax and Green	Wash, remove the stems and tips; cut into 1-inch lengths or slice into long, thin strips.	15-25	7	30-35	2-2½	5-8		1½ pounds	Serve with butter, salt and pepper; cook with herbs or mushrooms.
Beets—Whole Sliced	Cut tops 2 inches from root; wash and do not break the skin; if using the pressure cooker, peel before cooking.	25-45 15-25			15-18 8-10		115 90	2½ pounds	Serve with butter, salt and pepper; or with vinegar or lemon juice.

VEGETABLE COOKERY TIME-TABLE—*(Cont'd)*

Kind of Vegetable	Preparation	Cooking Time in Minutes						Amount for 6	Serving Suggestions
		Boil	Boil frozen and thawed	Steam	Pressure Cook	Pan Saute	Bake 350°		
Mild Flavoured (Cont'd)									
Carrots	Wash; scrape or peel. Leave whole if small, slice or dice.	15-20	10	20-30	2-3	5-8		1½ pounds	Season with butter, salt and pepper; pour over a little orange juice and melted butter; garnish with mint.
Celery	Clean with brush; remove leaves and cut into ¾-inch pieces.	30-40			10-12			1½ bunches	Serve with Vegetable Sauce.
Corn	Remove leaves and silk; cook in boiling water to cover when boiling.	6-10	3-5		5			8-10 cobs	Serve with butter, salt and pepper.
Eggplant	Peel just before using, to avoid discoloration; dice or slice.	10-20					30	1½-2 pounds	Garnish with onion or tomatoes. Serve with cheese or celery.
Mushrooms	Tender, fresh mushrooms need no peeling; leave whole, slice or dice.				1	4-5			Season with butter, salt and pepper. Serve with green pepper, onion or tomato.
Parsnips	Peel or scrape; cut lengthwise or crosswise; remove cores if tough.	20-30		30-40	10			1½ pounds	Serve with butter, salt and pepper & chopped parsley.

VEGETABLE COOKERY TIME-TABLE—*(Cont'd)*

Kind of Vegetable	Preparation	Cooking Time in Minutes						Amount for 6	Serving Suggestions
		Boil	Boil frozen and thawed	Steam	Pressure Cook	Pan Saute	Bake 350°		
Mild Flavoured (Cont'd)									
Peas	Remove from pods; rinse.	15-25	5	15-25	1			3 pounds	Can be cooked with mint; drain, serve with salt, pepper and butter or Vegetable Sauce.
Potatoes—Irish	Wash and peel, or cook in skins.	25-30		20-30	8-10		425° 50-60	2 pounds	Serve with melted butter and finely chopped parsley, and salt and pepper; can also be sprinkled with paprika. Sweet potatoes can be served with a sweet sauce or candied.
Sweet or Yams	Scrub and cook in skins.	30-40		35-45	8		425° 50	2 pounds	
Salsify	Scrub, peel and cut into slices or cubes.	20-25							Serve with Vegetable Sauce or butter, salt and pepper.
Squash—Hubbard	Cut into chunks, remove seeds and bake; for mashing peel, dice and steam	25-35	reheat	20-25	12-15		60-90	2-3 pounds	Season with butter, salt and pepper.
Acorn	Cut in half; remove seeds and bake or steam cut side down			20			50		Fill hollow with butter, salt and pepper and a little brown sugar or honey.

VEGETABLE COOKERY TIME-TABLE—*(Cont'd)*

Kind of Vegetable	Preparation	Cooking Time in Minutes						Amount for 6	Serving Suggestions
		Boil	Boil frozen and thawed	Steam	Pressure Cook	Pan Saute	Bake 350°		
Strong Flavoured									
Broccoli	Soak in salted water 10 minutes, trim and cut off flowerets from main stalks. Split ends of stalks.	15-20		20-30	1½-2			2 pounds	Serve with melted butter, salt and pepper or either Cheese or Hollandaise Sauce.
Brussels Sprouts	Remove the wilted leaves; leave whole. Wash. Stand 30 minutes in salted water.	12-20		20-25	2			1½ pounds	Serve with butter, salt and pepper or Vegetable Sauce.
Cabbage	Remove wilted outside leaves; cut in quarters or shred.	5-15		10-20	1-1½	5-8		1 pound ½ medium head	Serve with butter and seasonings or Cheese Sauce.
Cauliflower	Remove leaves and stem; soak 10 minutes in salted water; leave whole or divide into flowerets.	10-20 25-30 Whole	8-10	15-30	2-3			2½ pounds 2 small heads	Serve with butter and seasonings or Cheese Sauce.
Onions	Peel onions under water; quarter or leave whole.	30-40		25-30	5-8	10-15	45-60	1½ pounds	Serve with butter and seasonings or either Cheese or Vegetable Sauce.

VEGETABLE COOKERY TIME-TABLE—*(Cont'd)*

Kind of Vegetable	Preparation	Cooking Time in Minutes						Amount for 6	Serving Suggestions
		Boil	Boil frozen and thawed	Steam	Pressure Cook	Pan Saute	Bake 350°		
Strong Flavoured (Continued)									
Turnips—Yellow ..... White	Wash, cut ½-inch slices and peel; dice	20-30		25-35	10	5-8		1½ pounds	May be cooked with a little chopped onion; season, serve in cubes or mash.
Leafy									
Spinach and Beet Tops	Remove roots and coarse stems; wash in warm water and rinse twice. Cook in water which clings to leaves, no more!	8-10		15-20		5-6		3 pounds	Serve with butter, salt and pepper or a little chopped crisp bacon; nutmeg gives extra flavour.
Swiss Chard	Remove roots and coarse stems; wash in warm water and rinse twice. Cook in water which clings to leaves, no more!	10-15		20-35	5	8-10		3 pounds	Serve with butter, salt and pepper or a little chopped crisp bacon; nutmeg gives extra flavour.
Kale	Remove roots and coarse stems; wash in warm water and rinse twice. Cook in water which clings to leaves, no more!	15-25			3½-5	5-8		3 pounds	Serve with butter, salt and pepper or a little chopped crisp bacon; nutmeg gives extra flavour.

BOILED POTATOES

1. Select potatoes that are smooth and of uniform size.
2. Cook in boiling, salted water until soft.
3. Drain and let stand uncovered in a warm place until served.
4. Serve hot.
5. Potatoes may be boiled with the skins on, or steamed.

RICED POTATOES

Variation

1. Put cooked potatoes through a hot potato-ricer and serve at once. Do not pack or mash in putting into the serving-dish. Sprinkle with paprika.

CREAMED POTATOES

1. Cut the boiled potatoes into ½-inch cubes. Make a medium white sauce and combine with potatoes while hot. Add finely cut parsley and serve.

MASHED POTATOES

6 boiled potatoes.
2 tbsp. butter.
4 tbsp. hot milk.
½ tsp. salt.
Pepper

1. Mash the cooked potatoes with a potato-masher until soft; add the butter, salt, pepper, and milk, and beat all until light and fluffy. Pile lightly in a hot serving-dish.

BAKED POTATOES

1. Select smooth, medium-sized potatoes.
2. Wash well with brush.
3. Bake in a hot oven 45 min., or until done.
4. Break the skins to let the steam escape and serve at once. If baked potatoes stand they become soggy.

STUFFED POTATOES

6 medium-sized potatoes baked.
2 tbsp. butter.
½ tsp. salt.
4 tbsp. hot milk.

1. Cut a slice from the side of the potato and scoop out the inside.
2. Mash, add butter, hot milk, and seasonings.
3. Beat until light and fluffy. A stiffly beaten egg-white may be added.
4. Refill skins and brown in a hot oven.
5. Grated cheese may be added, if desired.

FRANCONIA POTATOES

1. Wash and pare potatoes and parboil 10 min.
2. Drain and place in pan in which meat is roasting.
3. Bake about 40 min., basting with fat in the pan when basting the meat.

SCALLOPED POTATOES

1. Prepare potatoes as for boiling.
2. Cut in ⅛-inch slices.

3. Put in layers in buttered baking-dish; sprinkle with salt and pepper and dredge with flour.
4. Dot over with small pieces of butter.
5. Add hot milk until it may be seen through the top layer.
6. Bake about 1 hr.

SCALLOPED TOMATOES

1 can or 1 qt. tomatoes.
1 tsp. salt.
Pepper.
1 c. soft-bread crumbs.
3 tbsp. butter or substitute.

1. Mix together ingredients and pour into buttered baking-dish.
2. Cover with buttered crumbs and bake in a hot oven 30—40 min.

SCALLOPED VEGETABLES

2 c. cooked vegetables.
1 c. medium white sauce.
1½ c. buttered crumbs.

1. Use cooked potatoes, cabbage, cauliflower, onions, etc.
2. Butter a baking-dish; put in vegetables.
3. Pour over white sauce; cover with buttered crumbs (1 c. crumbs, 1—2 tbsp. butter).
4. Bake in a moderate oven until heated through and crumbs are brown.

BAKED BEANS

4 c. small white beans.
¼ lb. fat pork.
2 tsp. salt.
1 tsp. mustard.
2 tbsp. brown sugar.
1 tbsp. molasses.
¼ tsp. pepper.

1. Pick over and wash beans.
2. Soak overnight in cold water to which baking-soda has been added (½ tsp. to 1 qt.).
3. Drain; add fresh boiling water and cook below boiling-point until skins wrinkle when beans are exposed to the air. Drain.
4. Scald and scrape the rind of the pork.
5. Place thin slice of pork in bottom of crock; turn in the beans; put remaining pork on top of the beans.
6. Mix molasses, sugar, and seasonings with 1 c. of boiling water; pour over beans; add enough boiling water to cover beans.
7. Cover; bake in a slow oven 6—8 hr.; uncover last hour to brown the top.

Note.—Add water as needed during cooking, or add stewed and strained tomatoes or tomato catsup during last hour of cooking.

BAKED SQUASH

1. Cut squash in halves or in 4-inch squares; remove seeds and stringy fibres.
2. Place in dripping-pan with the soft part up (a little water may be added); cover; bake in a hot oven, until soft, 1—1½ hr.
3. Scrape from shell; mash, season with butter, pepper, and salt.

Note.—Hubbard squash may be steamed if desired.

HARVARD BEETS

1. Wash twelve small beets.
2. Cook in boiling water until soft. (In preparing beets, remember to leave at least 1 inch of the stem on the beets, otherwise they will bleed and be most unappetizing when cooked. Young beets may be prepared and cooked in a small amount of water.
3. Remove skins, and cut beets in thin slices, small cubes or fancy shapes.
4. Mix ½ c. sugar and ½ tbsp. corn-starch.
5. Add ½ c. vinegar and let boil 5 min.
6. Add beets and let stand on back of range for 20—30 min.
7. Just before serving, add 2 tbsp. butter.

STEAMED VEGETABLE MARROW

1. Cut marrow in slices 1 inch thick, then in pieces for serving; remove skin.
2. Place on plate in steamer; cover with cheese-cloth.
3. Steam until tender, about 20—30 min.
4. Lift out carefully; serve with butter, pepper, and salt, or vegetable sauce made with the water which has collected.

SALADS

The term "salad" covers a great variety of foods, from the simple salad of lettuce to the complicated dish that is a whole meal in itself. The salad may be an appetizer, a dessert, or the main dish. All good salads have three points in common—they must be served cold, they must be attractive in appearance, and they must be pleasing in flavour.

There are four different types of salad:—

1. *The Green Salad.*—This salad is especially rich in minerals, vitamins, and cellulose. It is made of lettuce or other salad greens, such as cabbage, celery, endive, cress, tender dandelion-leaves, or tomatoes.

2. *The Fruit Salad.*—This is also rich in minerals, vitamins, and cellulose. Fresh or cooked fruits, and even dried fruits, may be used. The fruit salad may be served either as an appetizer or as a dessert. In the latter case, Fruit Salad Dressing should be used.

3. *The Starchy Salad.*—This includes salads made of potatoes, macaroni, rice, peas, and beans.

4. *The Protein Salad.*—This salad is made of eggs, meat, fish, cheese, or gelatine.

Most of our salads are a combination of these types. Lettuce is generally used in every type, but shredded cabbage may be substituted for it when lettuce is out of season.

There are three kinds of lettuce—leaf, head, and iceberg lettuce. This last type is a head-lettuce which has a very tightly curled centre.

Leaf-lettuce should be broken apart and well washed. Head-lettuce should be immersed upside down in very cold water. This treatment opens and crisps the leaves and the sand and small insects float out. The iceberg lettuce should have the core cut out, and then be held under running water or rinsed up and down in a bowl of water. As this is being done, the head of lettuce should be held in the two hands, the thumbs gently forcing the leaves apart. If the leaves are not

perfect, it is better to shred them before using them in a garnish. To do this, several leaves should be rolled together and cut in thin threads with scissors or a sharp paring-knife.

HINTS ON THE PREPARATION OF SALADS

1. Have salad greens clean, crisp, and chilled.
2. Cut the foods into small, uniform pieces, using a board and a sharp knife. Vegetables for *green* salad should not be cut—twist and tear.
3. To dice cooked vegetables, such as beets or potatoes, cut off a slice ¼ inch thick, place on a board, and cut in strips ¼ inch thick, and then, without moving, cut across in ¼-inch widths.
4. For speed, use a chopping-bowl and chopper or a grater. Vegetable-graters shred the raw vegetables and are easy to use and easy to clean. If a knife is used to cut the vegetable, it should be a very sharp one.
5. If parsley is used, remove stems and chop fine.
6. To shred cabbage, cut the cabbage in half, and after removing the core shave off thin slices from the cut surface.
7. To marinate salads, sprinkle with French dressing and chill for half an hour.
8. In mixing salad ingredients, handle them lightly so that pieces will not be crushed.
9. In arranging salads, remember that simple salads are most attractive. Do not overgarnish or overload the plate or salad-bowl.
10. Use garnishes that can be eaten. Any of the salad greens mentioned above may be used. Paprika added to potato salad will add colour. Chopped pimento, egg-yolk—hard-cooked and pressed through a sieve—grated cheese, sliced oranges, or apples chopped with the red skins on will add colour to salads.
11. In making individual salads, arrange the lettuce so that there is a border of the plate showing all around it. Never have the lettuce-leaf hanging over the edge of the plate. A flat arrangement of ingredients is much less interesting than one that is lightly piled towards a peak.
12. Place salad dressing attractively. Do not dab it on in several places. When placed on the top or tucked in a hollow in the lettuce-leaf, it adds to the attractiveness of the salad.
13. Serve salads from a large bowl or deep platter, or arrange on individual plates, or small salad bowls.

SALAD DRESSINGS

BOILED SALAD DRESSING

½ tsp. salt.
1 tsp. mustard
f.g. cayenne.
1/3 c. sugar.
3 tbsp. flour.
1 egg or 2 yolks.
1 tbsp. butter.
1 c. milk or water.
½ c. vinegar plus sufficient cold water to make 2/3 cup.

1. Mix dry ingredients in upper part of a double boiler.
2. Add eggs, well beaten, and milk.
3. Add vinegar slowly.
4. Cook over boiling water, stirring constantly, until thick.
5. Remove from heat; add butter; strain and cool.

NOTE.—If milder dressing is desired, use 1 tbsp. less vinegar.

BOILED SALAD DRESSING—II

2⅔ tbsp. butter.
2⅔ tbsp. flour.
2⅔ tbsp. sugar.
f.g. paprika.
2/3 tsp. salt.
1/3 c. vinegar or lemon juice.
1/3 c. boiling water
2 eggs.
2/3 tsp. mustard.

NOTE.—Two egg-yolks may be substituted for 1 egg.

1. Melt butter and add flour.
2. Add boiling water and cook in double boiler until thick—10-15 min.
3. Mix vinegar, mustard, and seasonings together and add to mixture.
4. Cook about 5 min.
5. Add slowly to beaten eggs.
6. Cook 3 min.
7. When using, thin to desired consistency. Whipped cream may be added, if desired.

FRENCH DRESSING

1 tsp. salt.
¼ tsp. pepper.
4 tbsp. vinegar or lemon-juice.
4 tbsp. salad-oil.
¼ tsp. paprika.

1. Combine ingredients; shake in a bottle or stir until well blended.

MAYONNAISE DRESSING, I

½ tsp. mustard.
1 tsp. salt.
1 tsp. powdered sugar.
f.g. cayenne.
1 egg-yolk.
2 tbsp. lemon-juice *or*
2 tbsp. vinegar.
1 c. salad-oil.

1. Mix dry ingredients.
2. Add yolk of egg; beat thoroughly, using a Dover beater.
3. Add vinegar or lemon-juice and beat.
4. Add 1 tsp. of oil; beat thoroughly.
5. Continue until about half the oil is used.
6. Add the remaining oil in larger quantities.

NOTE.—(1) Ingredients should be cold. (2) If the dressing curdles, add it gradually to a beaten yolk of egg. Beat with a Dover beater until smooth and thick. (3) Whipped cream may be added just before serving. (4) One whole egg may be used with 1½ to 2 c. of oil.

MAYONNAISE DRESSING, II

1 egg.
2 tbsp. sugar.
1½ tsp. salt.
2 tsp. dry mustard.
4 tbsp. corn-starch.
⅛ tsp. paprika.
¼ c. vinegar.
¾ c. salad-oil.
1 c. water.

1. Put egg, sugar, seasoning, vinegar, and oil in mixing bowl, ***but do not stir.***
2. Make a paste by mixing the corn-starch with ½ c. water.
3. Add additional ½ c. water and cook over a slow fire, stirring constantly until it boils and clears up.
4. Add hot corn-starch mixture to ingredients in mixing-bowl and beat briskly with Dover egg-beater. Cool before serving.

THOUSAND ISLAND DRESSING

Variations

1 c. mayonnaise dressing.
2 tsp. chili sauce.
2 tbsp. catsup.
2 tbsp. chopped gherkins or olives.
2 tbsp. finely chopped pimento.
2 eggs, hard-cooked and cut in small pieces.
½ c. cream, whipped.

1. Combine all ingredients except cream. Chill and add whipped cream just before serving.

SALAD DRESSING (NO COOKING)

2 eggs (beaten until light).
2 tsp. salt.
2 tsp. mustard.
1 c. vinegar.
2 tsp. butter (melted).
f.g. red pepper or paprika.
1 can Borden's Eagle Brand Condensed Milk.

1. Beat the first four ingredients vigorously for a few min.
2. Add the vinegar; stir well.
3. Add melted butter and red pepper.
4. Set aside for a few hours to thicken.

NOTE.—This dressing will keep for weeks.

FRUIT SALAD DRESSING

Juice of 1 lemon.
½ c. pineapple-syrup.
1 tbsp corn-starch.
Pinch of salt.
1 egg-yolk.
¼ c. sugar.
1 egg-white.

1. In the top of the double boiler, put the lemon-juice, pineapple-juice, corn-starch, and salt, and mix well.
2. Cook over hot water, stirring all the time until it thickens. Cook 5 min. longer.
3. Mix egg-yolk and sugar, and add hot mixture.
4. Cook 3 min. longer.
5. Beat egg-white stiff and fold into hot mixture. Cool by replacing the hot water in the lower part of the double boiler with cold water.
6. Place in the refrigerator to chill.

Variation.—½ c. of whipped cream may be used in place of the egg-white. Fold the whipped cream in just before serving.

SALAD SUGGESTIONS

Mayonnaise or boiled dressing may be used with the following:—

1. *Waldorf Salad.*—1 c. apples, 1 c. celery, topped with finely chopped nuts. When nuts are added to the salad they cause the apples to darken.
2. Shredded cabbage, diced pineapple, and green pepper.
3. Shredded cabbage, diced celery, grated carrot, and a very little onion.
4. Lettuce, ripe tomatoes, sliced cucumber, hard-cooked egg.
5. Apple, banana, celery, and pimento.
6. Bananas rolled in chopped nuts.
7. 1 c. banana, 1 c. pineapple, ½ c. cherries.
8. 2 c. salmon or tuna fish, 1 c. celery (chopped finely), ½ doz. sour pickles.
9. 2 c. diced, cooked beets, 1 c. celery or shredded cabbage, ½ c. horse-radish.

10. Canned pears or peaches cut in halves with shredded almonds or cream cheese balls.
11. Ripe tomatoes stuffed with chopped apple, celery and cucumber.

French Dressing may be used with the following combinations:—

1. Sliced tomatoes, green peppers, celery, and cucumber.
2. Green peppers stuffed with cream cheese, sliced crosswise, served on lettuce.
3. Cooked asparagus stalks and pimento strips.
4. Equal parts of orange and grapefruit sections.
5. Dates stuffed with cream cheese and nuts.
6. Whole string beans, sliced radishes and pimentoes.

CURLED CELERY

1. Cut the celery-stalk into 2½-inch strips.
2. Slash from each end of the strip to within ½ inch of the centre.
3. Place in cold salted water to curl—about ½ hour.

RADISH ROSES

1. Cut the skin of the radish into 6-8 sections to within ¼ inch of the stem.
2. Separate the skin from the centre; place in cold water to curl.

CARROT CURLS

1. Pare large, crisp carrots with the vegetable parer. Shave off lengthwise strips; roll around finger tip—chill.

TOSSED GREEN SALAD

Sprinkle salt in wooden bowl; rub cut clove of garlic over salt in bowl. Be sure greens are dry. Twist and tear (never cut) selection of greens into bowl. Add other vegetables, such as onion and celery. Sprinkle with salt, pepper, paprika and a little dry mustard. Just before serving, pour oil (half olive, half salad oil, if desired) over greens; toss lightly until leaves glisten. Then pour over greens half as much vinegar (mixture of different vinegars and lemon juice, if desired) as oil used. Toss again, serve immediately.

POTATO SALAD

3 c. cold, boiled potatoes.
1 slice onion, chopped finely.
4 tbsp. parsley, finely chopped.
4 tbsp. sweet pickles, or
4 tbsp. cucumber, diced.
1 c. celery, diced.
2 hard-cooked eggs.
½ c. salad dressing.
Lettuce.

PERFECTION SALAD

1 tbsp. granulated gelatine.
¼ c. water.
¼ c. vinegar.
Juice of ½ lemon.
¼ c. sugar.
½ tsp. salt.
1 c. boiling water.
1 c. diced celery.
½ c. shredded cabbage.
¼ c. pimentoes.

1. Soften gelatine in cold water.
2. Mix vinegar, boiling water, lemon-juice, salt, and sugar.
3. Bring to a boil and add the softened gelatine.
4. When mixture begins to thicken add the celery, cabbage, and pimentoes.
5. Chill and serve with mayonnaise dressing.

JELLIED TOMATO SALAD

1½ tbsp. gelatine.
1/3 c. cold water
2½ c. tomatoes.
¼ c. water.
1 bay leaf.
1 slice onion.
⅛ tsp. dried celery leaves.
4 cloves.
4 pepper berries.
1 tsp. sugar.
1½ tsp. salt.
2 tsp. lemon-juice.

1. Soften gelatine in cold water.
2. Simmer next 8 ingredients 20 min. Add lemon-juice.
3. Pour over softened gelatine, stirring until gelatine is dissolved. Press through a sieve. There should be 2 c.
4. Pour into moistened moulds and chill.
5. Unmould on lettuce.

NOTE.—When mixture is partially set, chopped parsley, hard-cooked eggs, peas, diced, or sliced celery, or stuffed olives may be added.

QUICK AND EASY TOMATO ASPIC

1 pkg. lemon flavoured gelatin.
1 c. boiling water.
1¼ c. tomato juice.
2 tbsp. cider vinegar.
2 tbsp. sugar.
salt.

1. Dissolve the lemon jelly powder in the boiling water.
2. Add vinegar, sugar, salt and tomato juice.
3. Chill until set.

QUESTIONS—VEGETABLES AND SALADS

1. What reasons can you give for serving raw vegetables frequently?
2. What reasons would you give in convincing an adult that he should eat vegetables?
3. Give two methods of cooking vegetables so that the minerals may be retained.
4. Why do doctors often recommend canned tomatoes instead of orange-juice for babies and young children?
5. Such vegetables and fruits as cabbage and prunes were once looked down upon. Why are they now considered important foods?
6. What foods give you adequate vitamins?
7. What care should be taken in making and serving salads?
8. When a can of vegetables is opened, should the liquid be thrown away? What would you do with it?
9. In preparing potatoes, the peelings should be very thin. Why?
10. What vegetables contain a high percentage of carbohydrates?
11. What class of vegetables is especially valuable for minerals and vitamins?
12. Give in detail the method of cooking cabbage.
13. Cauliflower sometimes becomes brownish in colour. Explain the reason.
14. How should mild-flavoured vegetables be cooked?
15. Give the points to be observed in selecting the following: Head-lettuce, leaf-lettuce, celery, cabbage, tomatoes, green corn, green peas.
16. What foodstuffs are found in the potato?
17. Should peeled potatoes be soaked? Why?
18. In cooking potatoes, which are the best methods to use? Why?
19. How may baked potatoes be kept from getting soggy?

20. One green and one starchy vegetable makes a good selection in planning menus. Why?
21. Why are vegetables laxative?
22. Name several vegetables especially rich in iron.
23. What vitamins are found in vegetables?
24. Do vegetables yield a high energy return?
25. Why is it best to eat one raw vegetable each day?
26. Why may we say "Vegetables are good health assurance"?
27. Why do we advise eating the skins of baked potatoes?

EGGS

Eggs are rich in protein, minerals, and vitamins, all of which substances are needed in the growth and repair of muscle, bone, and blood. Because of their value in the building and repairing of tissue, eggs should be included in the diet of growing boys and girls and of convalescents and undernourished persons.

Eggs lack carbohydrates. Consequently, eggs are usually served in combination with carbohydrate foods such as bread or potatoes.

The greater part of the nutrients for which the egg is prized are in the yolk. All the fat and practically all the vitamins, phosphorus, calcium and iron are in the yolk. The white of the egg is approximately one-eighth protein and seven-eighths water. The yolk of the egg is approximately one-third fat, one-sixth protein, and one-half water.

The protein found in egg is a protein of good quality. The protein in the white is called albumen; that in the yolk is chiefly vitellin.

Eggs resemble milk more nearly than does any other food. Milk is a richer source of calcium than are eggs, but eggs are a richer source of iron.

General Rules for Cooking

1. When you poach an egg you notice that the egg becomes firm when cooked. Heat appears to change the egg from a liquid to a solid substance. The reason why an egg changes in this way as it heats is that it contains proteins. These proteins coagulate when heated. This change is completed below boiling-point. Boiling temperature toughens the protein of the egg and makes it less easy to digest.

2. If eggs have come out of the refrigerator and are very cold it will require a longer time to cook them.

3. Yolks when beaten are thick and lighter-coloured than before beating. Whites are beaten when the beater comes out clean. They are beaten dry when the gloss is gone and the beaten mixture comes off the beater easily.

Uses of Eggs in Cookery

1. As a valuable food.
2. As a thickening agent for such foods as custards, sauces, and fillings for pies.
3. As a means of incorporating air in omelets, soufflés, and sponge cakes. Eggs have the property of holding air when beaten and are used to lighten a mixture. Slow cooking is necessary when eggs are used in this way.
4. To improve flavour and texture in muffins, cakes, cookies, and other mixtures.
5. As a coating agent—as in preparing food for deep-fat frying. The food,

such as croquettes and potato-balls, is rolled in egg and crumbs. This method prevents the food from absorbing an excess amount of fat.

Care of Eggs

1. Eggs should be kept in a cool, dry place.

It is unfortunate that eggs are not always refrigerated in retail stores. This is important, as a few days at 80° or over in the summertime, will cause eggs to spoil.

2. Eggs should be washed just before using; eggs for storing in water-glass should never be washed.

3. Since egg-shells are porous, eggs absorb odours readily and should never be kept where there are foods with strong odours.

4. An unbroken egg-yolk will not harden when covered with clean, cold water kept in a cool place. White of egg may be kept covered in a cool place.

5. Break eggs separately into a dish to make sure they are fresh before adding to other eggs or to a mixture. Strike the egg against the side of the mixing-bowl and then open with the thumbs. Or hold the egg in the left hand and strike it with a knife-blade. Press the thumbs into the crack and pull the shell apart.

Tests for Freshness

1. Fresh eggs have slightly rough shells.

2. Fresh eggs sink to the bottom in cold water. Stale eggs float, due to the large air-space.

3. Fresh eggs are clear when placed between the eye and a bright light in a dark room. Stale eggs are cloudy. This method of testing is used extensively in egg markets and is called "candling."

Grades

Eggs are graded according to quality. The grading is done in government inspected grading stations. The grades are A, B and C. Most of the eggs we see in the stores are Grade A. Some are labelled A 1, which means *"selects"*. These cost more per dozen than grade A eggs. There are five sizes in grade A eggs, as extra large, large, medium, small and peewee. Usually medium sized eggs are a better buy, and are quite satisfactory to use in most recipes. Grades B and C are purchased by many bakeries and are not readily available in stores.

Home Storage

Protein foods spoil more readily than any other class of foods. They contain or come in contact in the air with certain bacteria which cause decomposition. Egg-shells are porous and air enters into the shell as the water evaporates out of the egg. Any method which will exclude air will help keep eggs fresh. Only fresh, clean eggs, obtained in the spring and early summer when eggs are plentiful and the price low, should be preserved. Non-fertile eggs are preferable for storing.

The packing or preserving material and containers for eggs must be absolutely clean, since eggs are easily tainted in flavour. Eggs may be preserved in the following ways:—

1. Pack dry in sawdust, salt, bran, oats, or sand, with small end down.
2. Put in containers with enough water-glass to cover the eggs.
3. Coat with paraffin.
4. Put in cold storage.

SOFT-COOKED EGGS

Method I

1. Boil water—1 pt. for 1 or 2 eggs; ½ c. extra for each additional egg, or sufficient to cover the number of eggs to be cooked.
2. Set back where water will keep hot; —put in eggs and cover.
3. Let stand 4-6 min. for 1 or 2 eggs; 5-8 min. for several.

Method II

1. Place eggs in cold water in a saucepan, 1 pt. for 1 or 2 eggs; ½ c. extra for each additional egg.
2. Bring the water slowly to boiling-point.
3. Remove *at once* and serve.

NOTE.—This is the best method to use if eggs have just been taken from the refrigerator.

HARD-COOKED EGGS

Method I

1. Boil water—1 pt. for 1 or 2 eggs; 1 c. extra for each additional egg.
2. Put in eggs; cover; set back and let stand where water will keep hot, 30 min. Plunge immediately into cold water.

Method II

1. Put eggs into cold water; heat slowly to boiling-point.
2. Set back where water will keep hot; let stand for 20 min.

NOTE.—When hard-cooked eggs are to be used for garnishing, they should be plunged into cold water after cooking.

Cooling the eggs quickly as soon as they are cooked will help to prevent the dark ring forming around the yolk. The dark ring is due to the combination of some of the iron, with sulphur in the egg. It is quite harmless, but detracts from the appearance somewhat.

POACHED EGGS

1. Have boiling salted water in a shallow pan (at least 1½ inches deep).
2. Break egg into saucer; carefully slip the egg into the water. A muffin-ring will help to hold shape.
3. Cover; set back where water will keep hot, but not boil.
4. Cook until white is firm and a film has formed over yolk.
5. Lift up with a skimmer; drain; serve on toast. Sprinkle with paprika and garnish with parsley.

CREAMY EGG

3 eggs.	f.g. pepper.
3 tsp. butter.	2/3 c. milk.
¾ tsp. salt.	Toast

1. Beat eggs slightly; add butter, seasonings, and milk.
2. Cook over hot water.
3. As the mixture coagulates around the sides and bottom, draw it away with the spoon. Continue until all of the mixture is cooked.
4. Serve on toast; garnish with parsley.

NOTE.—When properly cooked this mixture should have the appearance of a firm custard broken up. It should not be stirred continuously nor cooked too long.

CREAMY EGG WITH CHEESE

2 eggs.
2 tsp. butter.
½ tsp. salt.
f.g. pepper.
½ c. milk.
Toast

1 slice semi-soft cheese—as Pasteurized Packaged Cheese approximately 2" x 3" and ¼ inch thick.

1. Put cheese in top of double boiler and place over boiling water.
2. Beat eggs—add butter, seasoning and milk.
3. Pour egg mixture over cheese in top of double boiler.
4. Cover and let cook over hot water for 15 minutes. Do not remove cover during this time.
5. Serve with toast.

CREAMED EGGS

5 hard-cooked eggs.
1 c. cooked macaroni.
½ c. grated cheese.
1¾ c. medium white sauce.
¾ c. bread-crumbs.
Salt and Pepper.

1. Cut eggs into slices; make white sauce; add grated cheese and heat until melted.
2. Add macaroni, eggs, and seasonings to sauce.
3. Pour into buttered dish and cover with buttered crumbs.
4. Brown in a hot oven.

NOTE.—Macaroni and cheese may be omitted if desired.

FOAMY OMELET

4 eggs.
½ tsp. salt.
4 tbsp. milk.
2 tsp. butter.
f.g. pepper.

1. Beat yolks of eggs; add seasonings and milk.
2. Beat whites until stiff, but not dry.
3. Heat an omelet-pan; put in butter; have sides and bottom of pan well buttered.
4. Cut and fold whites into yolk mixture.
5. Have pan very hot; turn in the omelet; spread evenly and reduce heat.
6. Cook slowly until omelet is set; place in moderate oven to dry slightly on top.
7. Fold; turn out; garnish and serve at once.

NOTE.—Finely chopped parsley may be folded into the mixture.

I. CHEESE OMELET

Variations

1. Make plain Foamy Omelet.
2. When cooked, sprinkle with grated cheese.
3. Fold, turn out, garnish, and serve.

II. TOMATO OMELET

1. Make plain Foamy Omelet.
2. When cooked, place canned tomatoes, drained of liquid, over top.
3. Fold, turn out, garnish, and serve.

CREAM SAUCE OMELET

1 tbsp, flour.
¼ tsp. salt.
f.g. pepper.
1 tbsp. butter.
½ c. milk.
2 eggs.
2 tsp. butter.

1. Cook first five ingredients as for White Sauce.
2. Cool. Add beaten yolks of eggs.
3. Finish as for Foamy Omelet.

QUESTIONS

1. What foodstuffs are found in eggs?
2. Which foodstuff is lacking in eggs? What can we serve with eggs to make up this deficiency?
3. Which mineral is high in the yolk of the egg?
4. Which foodstuff *chiefly* is contained in the white of egg?
5. What is meant by saying that eggs contain a "complete" protein or a protein of good quality?
6. What is the protein of egg-white called?
7. Which other common food closely resembles an egg in composition and value?
8. What change takes place in the protein of the egg when it is cooked? At what temperature does this take place?
9. What effect has a high temperature on the protein of an egg?
10. What are the five chief uses of eggs in cooking?
11. Why are eggs especially good for children and invalids?
12. At what temperature will an egg cook?
13. What care should be given eggs in the home?
14. Why is egg-white added to coffee? Explain what happens.
15. What tests have we for freshness in eggs?
16. What common methods of storing eggs have we?
17. What foods may eggs replace in a meal?
18. What is wrong with the statement, "Boil an egg for 3 min."?

CHEESE

Cheese is a very concentrated food, particularly rich in protein and fat and mineral salts. It provides an inexpensive substitute for meats and fish.

Because of its large protein content, cheese must be cooked at a low temperature, being heated only to the point of melting. Extreme heat toughens the protein and makes it less easy of digestion.

A low temperature will melt cheese smoothly. While cheese cooked at a high temperature is rubbery and tough.

Care of Cheese

Soft cheese should be treated as other perishable foods. Cover tightly and keep in the refrigerator.

Hard cheese becomes dry and mouldy if not stored in the refrigerator. Metal foil, waxed paper, cellophane or plastic make good wrappings to keep cheese fresh.

CHEESE SAUCE ON TOAST

1 c. medium white sauce. 1/3 c. grated cheese.
f.g. paprika.

1. Make white sauce.
2. Add cheese; stir until melted.
3. Pour over toast or crackers.

MACARONI AND CHEESE

1 c. macaroni. 1 c. grated cheese.
2 c. medium white sauce. 1/3-½ c. buttered crumbs.

1. Break macaroni into 1-inch pieces; wash.
2. Cook in large quantity of boiling, salted water till tender.
3. Drain; pour cold water through.
4. Make white sauce; add macaroni and cheese; heat until cheese is melted.
5. Turn into buttered baking-dish.
6. Cover with buttered crumbs.
7. Brown in oven.

Variation

Rice may be substituted for macaroni. Canned tomatoes may be substituted for milk, and cheese added only if desired. Canned tomato soup may also be used.

BUTTERED CRUMBS

1 c. soft crumbs or ¾ c. dry crumbs. 1 tbsp. melted butter

Mix thoroughly, stirring with a fork.

CHEESE SOUFFLÉ

3 tbsp. flour. 3 tbsp. butter.
½ tsp. salt. 1 c. milk.
Cayenne. 3 eggs.
½ c. grated cheese.

1. Make thick white sauce of the first five ingredients.
2. Remove from heat; add yolks of eggs, well beaten; add cheese.
3. Fold in whites beaten until stiff.
4. Turn into buttered baking-dish; bake in a pan of water in a slow oven 40-45 min.

Note.—Test by using a knife. When the knife comes out clean the souffle is cooked.

WELSH RAREBIT

1¼ c. grated cheese. 2 tsp. butter.
½—1 tsp. mustard. ¼ c. top milk.
½ tsp. salt. 1 egg.
Cayenne. Dry toast or crackers.

1. Place cheese in double boiler.
2. Mix seasonings; sprinkle over cheese.
3. Add butter in pieces; add milk.
4. When cheese begins to melt, stir until completely melted.

5. Add well-beaten egg; stir and cook a moment longer; too long cooking will cause curdling.

6. Serve at once, on crackers or toast.

QUESTIONS

1. Why is cheese called a "meat alternate"?
2. Why should cheese be eaten in small quantities?
3. Why should cheese dishes be cooked at a low temperature?
4. How does the cooking of cheese dishes affect the digestion of them?
5. From what is macaroni made? Explain. Name two other foods similar to macaroni.
6. What do we mean when we say cheese is a "concentrated" food?
7. What care would you give cheese in the home?
8. What is the difference between a cheese sauce and a Welsh Rarebit?
9. What other valuable foodstuffs besides proteins are contained in cheese?
10. What class of foods do we usually combine with cheese? Why?
11. Is cheese a good article of diet for staple use? Why?
12. Is the common impression that cheese is indigestible correct?
13. From what is cheese made? Name three kinds.
14. Why should a cheese sauce be made in a double boiler?

LUNCHEON DISHES

CORN PUDDING

2 tbsp. fat.
2 tbsp. chopped green pepper.
1 tbsp. chopped celery.
1 small onion, chopped.
1 can corn.
1 chopped pimento.
1¼ tsp. salt.
⅛ tsp. pepper.
3 eggs, beaten.
2 c. milk.

1. Melt the fat in a saucepan.
2. Add the green pepper, celery, and onion and cook slowly for 5 min.
3. Then add the remaining ingredients, and turn into a well-greased baking-dish.
4. Set in a pan of hot water and bake in a slow oven of 325° F. for 75 min. or until a silver knife inserted into the centre of the mixture comes out clean.

VEGETABLE SOUFFLÉ

2 c. medium white sauce.
3 egg-yolks.
3 egg-whites.
1 tsp. chopped onion.
1 c. cooked, sieved vegetable.

1. Pour the hot white sauce on the beaten egg-yolks while stirring constantly.
2. Add the chopped onion and cool.
3. Then add the sieved vegetable and, when well mixed, carefully fold in the stiffly beaten egg-whites.
4. Turn into a greased casserole.
5. Set the casserole in a pan of hot water and bake in a moderate oven of 375° F. for 45-50 min.
6. Serve plain or with a sauce.

NOTE.—Canned or fresh spinach, peas, asparagus, cauliflower, and similar vegetables can be prepared in this way.

SAVOURY LIMA BEAN SCALLOP

1½ c. dried lima beans.
1 small onion sliced.
½ tsp. salt.
1 c. diced celery.
2 tbsp. chopped green pepper.
1 c. condensed tomato soup.
½ c. water.
2 tbsp. melted butter.
⅛ tsp. pepper.
¼ c. buttered crumbs.

1. Soak the beans in cold water for 6-8 hr. Drain and cover with boiling water.
2. Add sliced onion and cook slowly until tender.
3. Drain, add salt, celery, green pepper, tomato soup, water, melted fat, pepper, and salt to taste.
4. Pour into greased casserole; sprinkle the top with the crumbs and bake in a hot oven of 400° F. for 30 min.
5. Bacon strips may be arranged on top of the casserole just before baking if it is to be served as a main dish.

CASSEROLE OF SPINACH

2 lb. spinach.
2 c. medium white sauce.
1 tsp. grated onion.
2 hard-cooked eggs.
½ c. fine bread-crumbs.
2 tbsp. butter.

1. Wash and cook spinach until tender.
2. Season with ½ tsp. salt and ⅛ tsp. pepper.
3. Add grated onion and sliced hard-cooked eggs to the white sauce.
4. Place a layer of spinach in the bottom of a greased casserole, then one of white sauce.
5. Repeat these layers, having white sauce on top.
6. Combine bread-crumbs and butter and sprinkle on top.
7. Bake in a moderate oven of 375° F. for 30 min.

CURRIED RICE

1 c. rice.
2 tbsp. butter.
¼ tsp. salt.
¼ tsp. pepper.
1 tsp. Indian curry.
1 tbsp. minced onion.

Boil the rice unil tender. Cook the minced onion in 2 tbsp. butter. Stir in the fluffy, boiled rice and seasonings. Serve hot with any meat, seafood, or hard cooked eggs.

SPANISH RICE

1 c. raw rice.
3 tbsp. fat.
1 tsp. sugar.
1 tsp. salt.
½ c. onion, chopped.
½ c. celery, chopped.
½ c. green pepper, chopped.
3 c. tomatoes.
1 c. water.

1. Wash the rice; drain. (uncooked).
2. Saute the rice, onion, celery and green pepper in the fat until they are tender.
3. Combine the tomatoes, water and seasonings; bring to a boil.
4. Pour into a casserole with the rice and tomatoes.
5. Bake at 350° for 1 hour.

CHEESE FONDUE

Brown 3 c. bread cubes in 3 tbsp. butter.

Place in alternate layers, with sharp grated cheese in a greased 6-inch casserole. Pour over the bread and cheese a mixture of:—

1 beaten egg.
1 cup milk.
½ tsp. salt.
f.g. pepper.
⅛ tsp. dry mustard.

Sprinkle with paprika. Bake in a pan of water in the oven at 350° F. for 40 minutes.

TUNA-POTATO CHIP CASSEROLE

2 cups flaked tuna fish (1 15-oz. can). 1 small bag of potato chips.
1 tin cream of mushroom soup.

Arrange layers of flaked tuna fish, potato chips and canned undiluted cream of mushroom soup in a greased casserole. Sprinkle with crumbled potato chips. Bake at 350° for 30-35 minutes.

RICE AND CHEESE MOULD

1½ c. shredded carrot (parboiled 5 min.).
1 tbsp. chopped onion.
1 c. grated cheese.
1 c. cooked rice.
½ tsp. salt.
1 well-beaten egg.
Paprika.

1. Turn into a buttered ring.
2. Bake at 350° F. for 30 min. in pan of hot water.
3. Unmould on a platter and fill with cooked peas seasoned.

FLOUR MIXTURES

WHEAT

Canada is one of the greatest wheat-producing countries in the world, so most Canadian children are familiar with the story of wheat. Our Prairie Provinces are internationally noted for wheat-growing. The United States, Argentina and Russia are also great wheat-producing countries.

The story of wheat, from the time the farmer ploughs his land and plants the tiny seeds until the huge threshing machine separates the straw from the grain, is an interesting one. In most cases, the grain is sown in early spring and matures during the warm summer months, in time for harvesting in the fall. In some regions, where winter is not too severe, a "winter" wheat is sown in the autumn, and is ready for harvest early the next summer. Like every other living thing, wheat varies from season to season and from climate to climate. Differences in soil, moisture and growing temperatures produce differences in the grain. In general, spring wheat is referred to as "hard" because it contains more or a tougher type of protein. Winter wheat is often referred to as "soft" wheat because it usually contains more starch and less or a more delicate type of protein. The protein in wheat is called "gluten", and the amount of it present in each type of flour helps to determine whether the flour is used for making bread, pastry or cakes. Gluten is elastic in nature and helps to form the framework of the bread, biscuits, cakes and other baked products.

The wheat kernel is actually composed of several layers (a picture-diagram may be secured from any reliable milling company). The outside *bran coats* make up about 14% of the kernel, and are composed chiefly of cellulose or roughage. Next is the *aleurone layer* containing some of the protein, minerals and vitamins. During the milling process, this layer is often removed because it is so close to the outside coats of bran. The inner portion, making up about 83% of the kernel, is known as the *endosperm*. This is made up chiefly of starch, but also contains some of the protein or gluten. The very inner part of the kernel is known as the *germ*. It is the part from which the plant grows, and is therefore, the richest source of minerals and vitamins in the entire kernel.

The milling of wheat (or of any grain) is the process whereby flour is made from the kernels. The purpose of milling is to break open the firm outer coats so that the inner part of the grain may be removed, and then to separate the outer bran portions, the germ and the inner white parts. The type and grade of flour, which results, depends on the "hardness" or "softness" of the wheat and on how completely these portions are separated.

Bread flour is rich in gluten and is somewhat granular to touch. It will not stick together when pressed in the hand, but because of the elasticity of its gluten, it produces bread of a very light texture. It is usually milled from blends of hard spring and hard winter wheats.

All-purpose flour is milled so that it is satisfactory for all household cooking purposes. It usually contains less gluten than bread flour and is especially suitable for yeast breads, quick breads and cakes.

Pastry flour contains less gluten and more starch than bread flour and is more finely milled. It makes a more tender, less elastic baked product. It sticks together when pressed in the hand, and is usually milled from soft wheats.

Cake flour is milled from soft wheat and contains the most highly refined flour streams of the mill. The gluten content is very low, and the product is very white and fine in texture.

Whole wheat flour or *graham flour* contains all parts of the wheat kernel, milled and blended to make a product suitable for cooking and baking. Graham flour is usually more finely milled, although both flours contain the germ of the wheat. Because the germ has a high fat content, and will become rancid upon storage, these flours should be purchased in smaller quantities than other types.

Enriched white flour (including enriched bread flour, enriched pastry flour and enriched all-purpose flour). Since February, 1953, Canadians have been able to buy enriched white flour. Because the majority of people seem to prefer white bread and white flour for their home baking, it was recognized that some attempt should be made to increase the nutritive value of white flour. Three B vitamins, thiamine, riboflavin and niacin, and the mineral iron may now be added in amounts specified by government legislation, during the milling of white flour. The resulting enriched white flour may then be used, by bakers or homemakers, to make enriched white bread, with specified amounts of milk solids also added by bakers to further increase the food value of the commercially made bread. The process of enrichment does not change the appearance, flavour, texture or baking properties of white flour or of enriched white bread made from it. However,

enrichment does increase the nutritive value of white flour so that when it is used the most essential nutrients of whole wheat flour, except the roughage, are provided.

CLASSIFICATION OF OVEN TEMPERATURES

Slow		Moderate	
250° - 325° F.	Time	325° - 375° F.	Time
Custards, 325° F.		Gingerbread, 350° F.	35 min.
Cheese dishes, 325° F.		Cookies (rolled), 360° - 375°F.	10 - 15 min.
Soufflés, 325° F.	1 hr.	Ginger Snaps, 360° - 375°F.	7 min.
Meringues, 300° F.	15 - 20 min.	Layer Cake, 375° F.	20 min.
Angel Food, 320° F.	1 hr.	Loaf Cake, 350° - 360° F.	45 min.
Sponge Cake, 320° F.	1 hr.	Cup Cakes, 375° F.	12 - 15 min.
Christmas Cake, 250° - 300° F.	3 - 4 hr.		

Hot		Very Hot	
375° - 450° F.	Time	450° - 550° F.	Time
Rolls, 400° F.	15 min.		
B.P. Biscuits, 425° - 450° F.	12 - 15 min.	*Pastry.*	
Muffins, 400° F.	25 min.	Shell, 500° F.	12 min.
Bread, 425° F.	15 min.	Double crust, 450° F.	40 min.
And reduced to 375° F.	35 - 45 min.		

NOTE.—The heat indicator for the oven should be checked occasionally with a standard portable thermometer, to maintain accurate oven temperatures. This is important, particularly if the stove is not new.

Simple Home Tests

1. A moderate oven turns a piece of unglazed paper a *golden* brown in 5 min.
2. A hot oven turns a piece of unglazed paper a *dark* brown in 5 min.

Batters and Doughs

Flour mixtures, before cooking, may be divided into batters and doughs, the consistency depending upon the proportion of liquid to dry ingredients.

	Liquid	Flour
1. Thin or pour batters; e.g., pop-overs or griddle cakes	1 c.	1 c.
2. Thick or drop batters; e.g., muffins	1 c.	2 c.
NOTE.—A cake mixtures comes between a pour and a drop batter. A drop cookie mixture comes between a drop batter and a soft dough.		
3. Soft doughs; e.g., tea biscuit, bread	1 c.	3 c.
4. Stiff doughs; e.g., pastry; rolled cookies	1 c.	4 c.

NOTE.—(1) In recipes for cake and pastries, the proportions given are for pastry-flour. (2) If all-purpose flour is used, substitute ⅞ c. for 1 c. pastry-flour.

LEAVENING AGENTS

A leavening agent, sometimes called "leaven," is used to make foods light. There are three in common use—carbon-dioxide gas, steam, and air. Most frequently, we rely on *carbon dioxide*, and it can be produced in a number of ways:—

1. *From Baking-powder.*—The most common source of carbon dioxide is baking-powder. It is a mixture of (1) baking-soda—an alkali; (2) an acid salt; and (3) starch. When the baking soda and acid materials are moistened, carbon-dioxide gas is given off. If the soda and acid are not only moistened, but heated, the gas is formed more quickly. Corn-starch is added to the mixture of soda and acid salt merely to prevent action should any moisture be present. It is wise to see that the baking-powder tin is always covered with a tight lid.

There are three kinds of baking powder on the market. The difference among them is the acid salt used and so they are identified by that ingredient, such as phosphate, tartrate and sodium aluminum sulphate-phosphate, often called double-acting. The first two are faster acting than the third. Be sure to read the label on the can and know which kind of baking powder you are using. The general rule is to use 1½ to 2 teaspoons of quick-acting (tartrate and phosphate) or 1 to 1½ teaspoons of the slow-acting powders (S.A.S. phosphate) to each cup of flour.

2. *From Soda and Sour Milk.*—When soda is added to sour milk we again get carbon-dioxide gas given off, the lactic acid in the sour milk having the same effect as the acids mentioned above.

When using baking soda, it is not necessary to dissolve it in the liquid, as stated in old recipes. It can be sifted with the dry ingredients.

3. *From Soda and Molasses.*—The ordinary molasses used in baking has sufficient acid to form carbon-dioxide gas when baking-soda is mixed with it.

4. *Yeast.*—Carbon dioxide was probably first obtained from yeast in the making of bread. Yeast is a microscopic plant that grows readily under favourable conditions. Sugar is a food for yeast and from it, in the process of its use by these tiny plants, carbon dioxide, which makes the dough light, is produced.

Steam.—Steam is quite effective in leavening batters. In pop-overs and cream puffs, steam is practically the only leavening agent used. During the cooking, part of the moisture is vaporized. The vaporization results in the expansion of the mixture and the product becomes lighter.

Air.—Air as a leavening agent is usually incorporated by means of beaten egg-whites. Air added by this method is the chief leavening agent in omelets, soufflés, sponge cakes, and angel cakes.

USE OF LEAVENING AGENTS

1. Use 1½ to 2 tsp. baking-powder to 1 c. flour.
2. After the first egg, reduce the baking-powder by ½ tsp. for each egg.
3. If baking-soda and sour milk are used, use ½ tsp. soda to 1 c. sour milk, and in addition use 1 tsp. baking-powder for each cup of flour.
4. If baking-soda and molasses are used, use ½ tsp. soda to 1 c. molasses.
5. If baking-soda and cream of tartar are used, use ½ tsp. soda with 1 tsp. cream of tartar to 1 c. flour.

GENERAL RULES FOR BATTERS (MUFFIN METHOD)

1. See to oven.
2. Prepare pans.
3. Sift flour *once* before measuring; then add baking-powder, sugar, and salt, and sift again.
4. Beat egg.
5. Make a depression in the flour, pour in egg, milk, then melted fat.
6. Stir as little as possible in mixing; turn into well-greased pans.
7. Bake in a hot oven.

NOTE.—In making muffins the cake method may be used. It gives a finer grain, but takes longer to prepare.

GRIDDLE CAKES (SWEET MILK)

2½ c. flour.
4½ tsp. baking-powder.
¼ tsp. sugar.
2 c. milk.
1 egg.
2 tbsp. melted fat.
1 tsp. salt.

Mix according to Muffin Method.

GRIDDLE CAKES (SOUR MILK)

2 c. flour.
2 tsp. baking-powder.
½ tsp. baking-soda.
½ tsp. salt.
2 tbsp. sugar.
2 c. stale bread-crumbs.
1 egg.
1¼ c. sour milk.
1½ tbsp. butter melted.

Mix according to Muffin Method.

POP-OVERS

2 c. flour.
2 c. milk.
2 eggs.
½ tsp. salt.
2 tsp. melted fat.

1. Beat the eggs slightly.
2. Sift flour and salt and add alternately with milk.
3. Add the melted fat.
4. Beat with egg-beater until smooth and full of bubbles.
5. Fill hot, greased pans two-thirds full.
6. Bake 30 min. at 450° F. and 15 min. at 350° F.

This makes nine pop-overs.

WAFFLES

2 c. flour.
3 tsp. baking-powder.
½ tsp. salt.
2 tsp. sugar.
1¾ c. milk.
2 eggs.
1½ tsp. butter melted.

Mix according to Muffin Method.

PLAIN MUFFINS

2 c. flour.
4 tsp. baking-powder.
¼ c. sugar
½ tsp. salt.
1 egg.
¼ c. melted fat.
1 c. milk.

Mix according to Muffin Method or Cake Method.

BLUEBERRY MUFFINS

Variations

Add 1/3 c. sugar
4 tbsp. fat.
½ c. blueberries.

Mix the same as for plain muffins. For blueberry muffins use a little less milk, since the juice of the berries adds moisture.

DATE MUFFINS

Add ¼ lb. dates cut fine.
1 additional tsp. baking-powder.

CORN-MEAL MUFFINS

1⅓ c. flour.
2/3 c. corn-meal
4 tsp. baking-powder.
4 tbsp. sugar.
½ tsp. salt.
1 egg.
1⅛ c. milk.
4-6 tbsp. fat.

Mix according to Muffin Method or Cake Method. Sour milk may be substituted for sweet milk provided other alterations are made.

WHOLE WHEAT MUFFINS

1 c. whole wheat flour.
1 c. white flour.
4 tsp. baking-powder.
½ tsp. salt.
3 tbsp. sugar.
1 egg.
1 c. milk.
2 tbsp. fat.

Make as plain muffins.

NOTE.—Dates, figs, or raisins may be added.

BRAN MUFFINS I.

1¾ c. flour.
¾ c. bran .
2 tbsp. sugar.
5 tsp. baking-powder.
½ tsp. salt.
1 egg beaten.
1 c. milk.
4 tbsp. molasses.
4 tbsp. melted fat.

1. Sift together dry ingredients.
2. Mix milk, molasses, and beaten egg. Add to dry ingredients.
3. Stir well together and add melted fat.
4. Bake in greased muffin-pan in a hot oven of 400° F. for 25 min.

BRAN MUFFINS II.

1 c. flour
½ tsp. soda.
2 tsp. baking-powder.
1½ c. bran.
¼ tsp. salt.
½ c. brown sugar.
1 tbsp. butter.
1 c. sour milk.
1 egg.

Mix according to the Muffin Method.

NUT BREAD

1 c. brown sugar.
2 c. flour (½ c. Graham and 1½ c. white).
1 c. raisins or dates.
½ c. nuts.
1 tsp. baking-soda.
f.g. salt.
2 tbsp. fat.
1 egg.
1 c. sour milk.

Follow general rules for mixing by Muffin Method.

DATE AND NUT BREAD

1 c. flour.
½ tsp. salt. Sift together.
1 tsp. soda.

Beat 1 egg until light; add ½ c. brown sugar firmly packed and beat until blended. Stir in 1 c. buttermilk. Add dry ingredients as above, and stir only until moistened. Add Rolled Oats (1 cup), 1 c. chopped walnuts, ½ c. dates sliced, and 2 tbsp. melted fat. Bake in 9 x 5 pan or in two small pans 3½ x 7½. Moderate oven 50 minutes for large pan or approximately 30 minutes for small loaves.

Sprinkle ½ tsp. nutmeg and ½ tsp. cinnamon on top before baking if spice is desired.

This loaf becomes more flavorful and moist if stored a day before using.

BOSTON BROWN BREAD

½ c. flour
1 c. Graham flour.
1 c. corn-meal.
1¼ tsp. baking-soda.
2 c. thick sour milk.
½ c. molasses.
1 tsp. salt.

1. Follow general rules for mixing by Muffin Method.
2. Turn into greased mould; cover tightly.
3. Steam 3 hr.; individual, 1¼ hr.
4. Turn out of mould on baking-pan; place in hot oven for a few minutes to dry the outside.

GINGERBREAD

1½ c. bread-flour or
1¾ c. pastry flour.
1½ tsp. soda
½ tsp. salt.
2 tsp. ginger.
¼ tsp. cloves.
2 tbsp. fat.
1 egg.
½ c. molasses (warmed).
½ c. brown sugar.
½ c. sour milk

Mix according to Muffin Method, putting soda in with the dry ingredients.

HOT-WATER GINGERBREAD

1½ c. flour.
¾ tsp. soda.
⅛ tsp. salt.
1½ tsp. ginger.
½ c. brown sugar.
¼ c. fat.
2 eggs.
½ c. molasses.
½ c. boiling water.

Mix according to Muffin Method.

SOFT DOUGHS

General Rules

1. See to oven.
2. Prepare pans.
3. Sift flour once before measuring; add baking-powder and salt.
4. Sift two or three times.
5. Cut shortening in with a knife, or work in with tips of fingers until mixture is fine.
6. Add milk gradually. This should be done with as little mixing as possible.

7. Turn out on *lightly* floured board; knead for a few seconds; roll ¾ in. thick.
8. Cut with a floured biscuit-cutter; place on greased or floured pan; bake in a hot oven, 425°-450° F., for 15-20 min.

BAKING-POWDER BISCUITS

2 c. bread-flour. ½ tsp. salt.
4 tsp. baking-powder. 4 tbsp. fat.
2/3 c. milk or water.

Follow the general rules.

EMERGENCY BISCUIT

Variation

To make Emergency Biscuit add sufficient liquid to the above so that it may be dropped from a spoon on a greased pan without spreading.

GRAHAM BISCUIT

One cup of Graham or whole-wheat flour may be substituted for 1 cup of white flour in the above recipe.

CHEESE BISCUITS

1. To biscuit recipe add 2/3 c. grated cheese; reduce the fat to 1 tbsp. to 2 c. flour.
2. Finish as Baking-powder Biscuits.

FRUIT ROLLS

1. To biscuit recipe add 2 tbsp. sugar.
2. Roll dough 1/3 inch thick.
3. Mix together 2 tbsp. butter, softened; 1/3 c. brown sugar; ½ tsp. cinnamon; 1/3 c. currants, raisins, or dates, and spread on dough.
4. Shape into a roll; press edges together.
5. Cut in ¾-inch slices.
6. Place in greased baking-pan, close together, with cut surfaces up.
7. Bake in a hot oven 15-20 min. (400° F.).

ORANGE TEA BISCUITS

1. Make biscuit, using 2 tbsp. fat to 1 c. flour.
2. Place in baking-pan; into the centre of each press a small cube of sugar which has been dipped in the following mixture: 1 tbsp. orange-juice; 1 tsp. lemon-juice; grated rind of ½ orange.
3. Bake as Baking-powder Biscuits.

STRAWBERRY SHORTCAKE

1. Use biscuit recipe and add 1 tbsp. sugar.
2. Mix according to rules.
3. Bake in a hot oven (425° F.).
4. Separate layers and place crushed strawberries sweetened to taste between and on top of cakes.
5. Cover with whipped cream if desired.

NOTE.—Other fruits may be used, as peaches, raspberries, bananas, etc.

BAKED APPLE BUNS

2 c flour.
4 tsp. baking-powder.
2 tbsp. sugar.
½ tsp. salt.
¼ c. fat.
½-2/3 c. milk.

FILLING

½ c. boiling water
8 cooking apples.
1 c. brown sugar.
1 tsp. cinnamon.
2 tbsp. butter.

1. Quarter, peel, and core apples. Cook in boiling water until tender.
2. Add sugar and butter.
3. Finish as Fruit Rolls.

BREAD-MAKING

The Straight Dough Method— (see recipe below) is the one most generally used for making a standard loaf of white bread. It is a method in which the dough is mixed in one operation and it takes about four hours from the start of preparation until the baked product comes out of the oven.

The Sponge Method is a variation of the one housewives used in the days when they set their bread to rise overnight. Nowadays it can be prepared in the morning and baked in the afternoon. Briefly, the mixing is done in two operations. In the first step, the yeast, sugar, part of the liquid and flour are combined to make a thick batter. This batter is called a sponge because it rises in the bowl until it is bubbly and has a sponge-like appearance. When the sponge has risen sufficiently, the remaining liquid, sugar, salt, shortening and additional flour are added to make a dough that can be kneaded.

Refrigerator Dough is one that can be kept for several days in the refrigerator, and you can cut off as little as you wish to bake at one time. This method (revolutionary departure that would have been impossible with old-fashioned yeast) is used chiefly for rolls because it includes eggs and extra amounts of sugar and salt. These ingredients extend the action of the yeast over a longer period.

These are the basic patterns of bread-making. You simply choose the method that fits your time-table best and there you are—all ready to bake bread and rolls. Straight dough, action-quick or sponge can be used for all yeast mixtures.

For rolls and sweet buns, you have these additional choices—no knead, refrigerator dough.

Flour—Wheat flour contains proteins in the right proportions to form a substance called gluten when liquid is added. The gluten forms a sort of frame-work which captures the tiny bubbles of gas from the yeast. Briefly, here is how it works:—

When the dough is first mixed, and the flour mixed with liquid, the gluten develops. Kneading spreads it through the dough so that on first rising there is a network that walls in the gas bubbles. When you punch down the dough after the first rising, you are actually breaking the gas bubbles, so that the finished loaf of bread has an even, tender texture. Only wheat flour has the right proportion of protein to make gluten and, even in rye bread or bread made from other cereal flours, there must be a certain proportion of wheat flour. Eggs help to

make the texture fine and delicate and give extra flavour, richness and colour to rolls and buns.

To knead bread sprinkle about half a cup of flour on the board. Now fold the dough toward you with a rolling motion, using the fingers of both hands. Push the ball of dough away from you, using the heels of your hands. Turn the dough one-quarter way around on the board and repeat the three steps. These three steps will soon smooth out into a definite rhythm, and you will see the rough, sticky ball of dough change into a smooth, satiny, tightly stretched orb.

Yeast is a microscopic plant which, under proper conditions, grows rapidly by budding. Conditions necessary for its growth are:—

1. Proper temperature—75°-80° F.
2. Proper food—carbohydrates (starch or sugar).
3. Moisture.

In the bread-dough the yeast changes the sugar and starch into carbon-dioxide gas and alcohol. The gas expands, and in its effort to escape it stretches the gluten, making the dough two or three times its original size.

Yeast is a living plant that grows and multiplies, giving off the bubbles of gas which cause the dough to rise. Fast-rising dry yeast, the kind most people use nowadays, is actually inactive yeast stored in little seed-like coverings. Water penetrates the covering, and together with sugar in the water revives the sleeping yeast to normal activity. Never dissolve dry yeast in milk—the milk solids retard the dissolving and dispersing action of the water. Yeast is purchased as Active Dry Yeast.

Liquid—Milk and water are the two liquids generally used in making yeast dough (although water is always used to soften the yeast in the initial stages). An all-water dough produces a bread with a wheatier flavour and a crisper crust. Milk produces a velvety grain that keeps better. Milk is always scalded to destroy bacteria hostile to yeast and bread flour.

Sugar—Sugar is the usual sweetener in yeast doughs because it works with yeast to produce tiny gas bubbles which raise the dough. However, honey, molasses or corn syrup are sometimes used in making dark, wholegrain breads.

Salt—Without enough salt, your baking will be flat tasting. However, it should not be added until the flour is in the dough, because it tends to control the action of the yeast. For the same reason, it is important not to use more salt than the amount specified in your recipe.

Shortening—Some kind of a fatty ingredient is included in all yeast doughs—vegetable shortening, margarine, butter or lard. Small amounts increase the elasticity of the dough so that the gas from the sugar and yeast can push it out more easily. Shortening also prolongs the freshness and tenderness of the product.

Baking

Bread is baked for the following reasons:—

1. To kill the yeast-plant.
2. To drive off the alcohol.
3. To burst the starch-cells.
4. To improve the colour and flavour.

Tests to Show when Bread Is Done

1. The crust should be a golden-brown.
2. The crust should be drawn away from the sides of the pan.
3. There should be a hollow sound when tapped with the knuckles.

WHITE BREAD

Straight Dough Method

2 cups lukewarm water.
1 envelope Fleischmann's Active Dry Yeast
1 teaspoon sugar.
2 cups milk.
3 tablespoons sugar.
5 teaspoons salt.
12 (about) cups sifted flour.
3 tablespoons shortening.

Put 1 cup lukewarm water in bread bowl, add yeast and 1 teaspoon sugar, stir and let stand 10 minutes. Add milk, sugar, salt and remaining water, then half the flour and beat well. Add shortening and remaining flour, or enough to make an easily handled dough.

Knead dough lightly until smooth and elastic.

Place dough in greased bowl, cover and set in warm place free from draft. Let rise until doubled in bulk. Punch dough down and let rise again until about ¾ as high as first rise, divide into 4 equal portions and shape into balls. Cover with cloth and let rest 10 or 15 minutes. Shape into loaves and place in greased bread pans. Cover and let rise until doubled in bulk. Bake at about 400° F. for about 45 minutes.

For extra fast rising, use 2 envelopes of yeast.

ACTION-QUICK METHOD

Use 2 envelopes of Fleischmann's Active Dry Yeast dissolved with 2 teaspoons sugar. Follow same procedure for mixing as the Straight Dough Method.

WHITE BREAD

Sponge Method

3 cups lukewarm water.
1 envelope Fleischmann's Active Dry Yeast.
1 teaspoon sugar.
4 tablespoons sugar.
18 (about) cups sifted flour.
2 cups milk.
3 tablespoons shortening.
1 tablespoon salt.

Put 1 cup lukewarm water in bread bowl, add yeast and 1 teaspoon sugar, stir and let stand 10 minutes. Dissolve 4 tablespoons sugar in remaining 3 cups water and add to yeast. Add 6 cups flour to make a sponge. Beat well. Cover and let rise in warm place free from draft about 2½ hours. When well risen, add lukewarm milk. Add shortening, salt and remaining flour, or enough to make an easily handled dough. Knead dough lightly until smooth and elastic. Place dough in greased bowl, cover and set in warm place free from draft. Let rise until doubled in bulk, from 1½ to 2 hours, divide dough into 5 equal portions and shape into balls. Cover with cloth and let rise 10 to 15 minutes. Shape into loaves and place in greased bread pans. Cover and let rise until doubled in bulk, about 1 hour. Bake in hot oven at about 400° F. for about 45 minutes. Makes 5 loaves.

NOTE.—The overnight sponge method is not recommended when using Active Dry Yeast.

WHOLE WHEAT ROLLS

Scald ..... 1 cup milk.
Stir in ..... ¼ cup lightly-packed brown sugar.
2 teaspoons salt.
¼ cup shortening.

Cool to lukewarm.

Meantime, measure into bowl ..... ½ cup lukewarm water.
Stir in ..... 2 teaspoons sugar.
Sprinkle with contents of ..... 2 envelopes Fleischmann's Active Dry Yeast.

Let stand 10 minutes, *then* stir well.

Stir in lukewarm milk mixture,
and ..... 1 egg, well beaten.
Stir in mixture of ..... 1¼ cups whole wheat flour
1 cup sifted all-purpose flour.

Beat well for 2 minutes, or until batter is smooth and elastic.

Scrape down sides of bowl. Cover with a damp cloth. Let rise in warm place, free from draft, until doubled in bulk, about 40 minutes.

Stir down batter.

Fill greased average-sized muffin pans about ¾ full.

Bake in a hot oven, 400° F., about 25 minutes.

WHITE ROLL DOUGH

(Straight-Dough Method)

Scald ..... 1 cup milk.
Stir in ..... 1/3 cup sugar.
2¼ teaspoon salt.
6 tablespoons shortening.

Cool to lukewarm.

Meantime, measure into bowl ..... ½ cup lukewarm water.
Stir in ..... 2 teaspoons sugar.
Sprinkle with contents of ..... 2 envelopes Fleischmann's Active Dry Yeast.

Let stand 10 minutes, *then* stir well.

Stir in lukewarm milk mixture.

Add ..... 2 cups sifted all-purpose flour.
Beat until smooth.
Stir in an additional ..... 1¾ cups (about) sifted all-purpose flour.

Turn out on lightly-floured board or canvas. Knead until smooth and elastic.

Place in greased bowl; brush with melted shortening.

Cover. Let rise in warm place, free from draft until doubled in bulk, about 1 hour.

Punch down and turn out on lightly-floured board or canvas.

Shape into rolls.

Let rise in a warm place until double in bulk.

Bake at 375° F. for about 30 minutes.

REFRIGERATOR ROLL DOUGH

(Straight-Dough Method)

Scald ..... ¾ cup milk.
Stir in ..... 6 tablespoons sugar.
1 tablespoon salt.
5 tablespoons shortening.

Cool to lukewarm.

Meantime, measure into bowl ..... ½ cup lukewarm water.
Stir in ..... 2 teaspoons sugar.
Sprinkle with contents of ..... 2 envelopes Fleischmann's Active Dry Yeast.

Let stand 10 minutes, *then* stir well.

Stir in lukewarm milk mixture.

Add ..... 1 egg, well beaten.
2 cups sifted all-purpose flour.

Beat until smooth.

Stir in additional ..... 2 cups (about) sifted all-purpose flour.

Place dough in greased bowl; brush top with melted shortening.

Cover tightly with waxed paper or aluminum foil. Store in refrigerator at least 2 hours or until needed. (Dough will keep 2 or 3 days.)

To use, punch down and cut off dough needed.

PARKER HOUSE ROLLS

Makes 24 Rolls

Make up either of the above roll doughs.

Halve the dough; form each half into a 12-inch roll.

Cut each roll into 12 equal pieces; form into smooth balls.

Roll each ball into an oval 2½ inches by 3½ inches, fold in half crosswise.

Place on greased baking sheets and press edges together lightly.

Brush lightly with melted butter or margarine.

Cover. Let rise in warm place, free from draft, until doubled in bulk. (Straight Dough Method about 1 hour; Action-Quick Dough about 30 minutes; Refrigerator Dough about 1 hour.)

Bake in a hot oven, 400° F., about 15 minutes.

COCOANUT PINEAPPLE COFFEE CAKE

Makes 1 Cake

In an 8-inch square pan
melt ..... 3 tablespoons butter or margarine.
Sprinkle with ..... 2 tablespoons brown sugar.
½ cup shredded cocoanut.
Drain well and add ..... 1/3 cup crushed pineapple.
Scald ..... 1/3 cup milk.
Stir in ..... 1/3 cup sugar.
¾ teaspoon salt.
¼ cup shortening.

Cool to lukewarm.

Meantime, measure into bowl ..... ½ cup lukewarm water.
Stir in ..... 1 teaspoon sugar.
Sprinkle with contents of ..... 1 envelope Fleischmann's Active Dry Yeast.

Let stand 10 minutes, *then* stir well.

Stir in lukewarm milk mixture.

Add ..... 1 egg, well beaten.
½ teaspoon vanilla.
2 cups sifted all-purpose flour.

Stir until well blended, about 2 minutes. Turn batter into prepared pan and spread evenly. Cover with a damp cloth.

Let rise in warm place, free from draft until doubled in bulk, about 1 hour and 15 minutes.

Bake in a moderately hot oven, 375° F., about 35 minutes.

Turn out of pan immediately. Serve warm.

CAKES

Cakes are divided into two classes: (1) Cakes without fat; e.g., sponge cake, angel food. (2) Cakes with fat; e.g., layer, loaf, and pound cakes.

Cakes without fat contain a large proportion of eggs and very little, if any, liquid. They depend upon the moisture of the egg and the incorporation of air in the albumen of the egg-white to furnish steam and air for leavening.

HINTS FOR SUCCESSFUL CAKE MAKING

Measurements must be accurate.

Use good ingredients.

The fat used should be well flavoured with good creaming qualities.

The sugar should be very fine so that it will dissolve quickly in the creamed fat.

Use regular baking powder unless otherwise stated in the recipe.

Pastry flour is used unless the recipe states all-purpose.

All ingredients should be at room temperature.

The pan should be the right size. An 8 x 8 pan is the size required for most recipes.

Place the cake in the centre of the oven for baking.

Do not grease the pan for sponge or chiffon cakes. A circle of brown paper, cut the exact size of the bottom of the pan may be used for butter cakes.

Do not grease the paper or pan.

Be sure the oven is the right temperature.

GENERAL RULES FOR CAKES WITHOUT FAT

1. See to oven.
2. Prepare pans. Rinse in cold water. Do not grease.
3. Sift the sugar to remove lumps.
4. Sift the flour once before measuring and do not pack in cup.
5. Separate the eggs, taking care not to get any yolk in the white portion.
6. Beat the yolks until lemon-coloured and thick.
7. Beat the whites until stiff but not dry.

8. Add the sifted sugar slowly to the yolk mixture while beating.
9. Then add the flavouring and fold in half of the beaten whites very carefully.
10. Cut and fold the flour into the mixture; then fold in the remaining whites.
11. Turn the mixture carefully into a pan used only for cakes without fat. Wet pan with cold water or sprinkle with flour.
12. A pan with a hollow centre is advisable, so that the heat may penetrate to all parts of the mixture evenly.
13. Bake at 320° F.

CHEAP SPONGE CAKE

⅞ c. pastry flour.
1½ tsp. baking-powder.
¼ tsp. salt.
2 eggs.
¾ c. sugar.
⅜ c. hot water.
½ tsp. lemon extract.

1. Follow general rules for mixing.
2. Bake at 320° F. for 25-40 min.
3. Invert over a cake-cooler and let stand till cool.
4. Then with a spatula loosen from the pan.

SPONGE CAKE

2/3 c. flour.
⅛ tsp. salt.
4 eggs.
2/3 c. sugar (fruit, or fine granulated).
½ tbsp. lemon-juice.
Grated rind of 1/3 lemon.

Follow general rules. Bake at 320° F. for about 1 hr.

ROLLED JELLY CAKE

1 c. flour (pastry)
1½ tsp. baking-powder.
⅛ tsp. salt.
3 eggs.
⅞ c. fine sugar.
Juice and rind of ¼ lemon, or lemon extract.
Strawberry jam or any jelly.
2 tbsp. milk.

1. Sift flour, then measure it.
2. Add baking-powder.
3. Separate eggs and beat both yolks and whites well.
4. Add three-quarters of the sugar to the whites and one-quarter to the yolks, and beat until dissolved.
5. Fold yolks into whites.
6. Fold in sifted dry ingredients alternately with milk. Add rind and flavouring.
7. Pour into a pan lined with greased paper.
8. Bake in a slow oven (320° F.) for 20 min.
9. When baked, turn quickly on to a clean, wet cloth and spread with jelly or jam.
10. Roll at once.

GENERAL RULES FOR CAKES WITH FAT

1. See to oven.
2. Prepare pans.
3. Sift flour, then measure it. Add baking-powder and salt and sift two or three times.

4. Cream fat.

5. Add sugar one-quarter at a time, beating until dissolved. (If a small amount of fat is used, part of the sugar may be added to the beaten egg to assist in combining it more readily).

6. Add well-beaten egg and beat well—about 2 min.

7. Add milk alternately with the mixed and sifted dry ingredients one-third at a time. Beat well after each addition.

8. When all ingredients have been added, beat 2 min.

9. Bake in greased pans in a moderate oven (350°-360° F.). It is best to line the bottom of the pan with greased paper.

10. Time for baking:—

Cup cakes, 12-15 min. Layer cakes, 20-30 min.

Loaf cakes, 45-60 min.

11. Tests to show that cake is done:—

(1) It is nicely browned.

(2) It shrinks from the edge of the pan.

(3) When pressed with finger it springs back.

(4) When a toothpick or knitting needle is placed in the centre it comes out dry.

CAUSES OF CAKE FAILURES

1. Outside Appearance

(a) Cracked Crust.—Too hot an oven or too much flour.

(b) Hard and Coarse Crust.—Too much sugar.

(c) Uneven Thickness.—Oven of uneven temperature or cake placed too close to one side of the oven.

2. Inside or Crumb of Cake

(a) Coarse Grain.—Too much moisture or sugar or baking-powder.

(b) Dry.—Too much flour or too hot an oven.

(c) Tough.—Too little fat.

(d) Heavy.—Too little baking-powder, or falling during baking or after removing from oven.

Falling of cake may be due to:—

(a) Too much fat or sugar or baking-powder.

(b) Too little flour.

(c) Jarring during baking.

SPICE CAKE (SMALL CAKE)

1¼ c. flour.
¾ tsp. baking-powder.
½ tsp. soda.
¼ tsp. salt.
½ c. raisins.
⅜ c. walnuts.
½ tsp. cinnamon.
¼ tsp. each of cloves and nutmeg.
½ c. brown sugar.
¼ c. fat
¼ c. molasses.
1 egg or 2 yolks.
½ c. sour milk.

Follow general rules, adding molasses to creamed fat and sugar.

FUDGE CAKE, I (LARGE CAKE)

2¼ c. pastry flour.
4 tsp. baking-powder.
½ tsp. soda.
½ tsp. salt.
5 tbsp. cocoa
1½ c. sugar.
⅜ c. fat.
2 eggs.
¾ c. sour milk.
⅜ c. hot water.
2 tsp. vanilla.

1. Sift flour, then measure it.
2. Add soda, baking-powder, salt, and cocoa to flour, and sift.
3. Cream fat. Add sugar. (Add one-half of the sugar to the beaten egg and one-half to the fat to assist in combining more readily).
4. Add beaten eggs.
5. Add sour milk and hot water with vanilla alternately with the dry ingredients.
6. Bake in a flat pan lined with greased paper, 35 min. to 1 hr.

FUDGE CAKE, II (INEXPENSIVE)

1¾ c. pastry flour.
2 tsp. baking-powder.
½ tsp. salt.
½ c. butter.
1 c. sugar.
2 squares unsweetened chocolate, melted, *or* 6 tbsp. cocoa.
1 egg, well beaten.
¾ c. milk.
1 tsp. vanilla.

1. Sift flour, measure, add baking-powder and salt. Sift three times.
2. Cream butter. Add sugar gradually.
3. Add melted chocolate, egg, and vanilla.
4. Add flour alternately with milk.
5. Bake at 325° F. for 1 hr.

NOTE.—If using cocoa, sift in with the flour.

DEVIL'S CAKE

2 c. fine pastry flour.
1 tsp. baking-powder.
¼ tsp. salt.
2 c. brown sugar.
½ c. butter.
2 eggs.
½ c. sour milk.
½ c. hot water.
1 tsp. soda.
1 tsp. vanilla.
1½ squares chocolate.

1. See to oven. Set at 325° F.
2. Sift flour, baking-powder, and salt.
3. Cream butter and 1 c. of sugar.
4. Beat eggs until light and add the other cup of sugar. Mix well. Add to creamed butter and sugar.
5. Add flour to creamed mixture alternately with sour milk, and beat vigorously. Melt chocolate over hot water.
6. Stir water and soda into melted chocolate and add to the batter.
7. Add vanilla.
8. Bake in a 9" square pan at 325° F. for 15 min. and 350° F. for 15 min.

ONE-EGG CAKE

½ cup shortening
1⅓ cups granulated sugar.
1 egg.
2¼ cups sifted flour.
½ teaspoon salt.
3 teaspoons baking-powder.
1 teaspoon vanilla.
1 cup milk.

Follow general rules for cakes with fat.

Bake in 8 x 8 pan at 350° F. for 40-45 minutes.

TWO-EGG CAKE

½ cup shortening.
1 teaspoon vanilla.
1 cup sugar.
2 eggs
2 cups flour.
2½ teaspoons baking-powder.
½ teaspoon salt.
¾ cup milk.

Follow general rules for cakes with fat.

Bake in 8 x 8 pan at 350° F. for 45 minutes.

ORANGE CHIFFON CAKE

1¼ c. sifted cake flour.
½ tsp. salt.
¾ c. fine sugar.
¼ c. oil.
1/3 c. orange juice.
3 egg yolks.
½ tsp. lemon flavouring.
1 tsp. orange rind.
3 egg whites.
2 tsp. baking powder.

Set oven at 350° F.

1. Sift sugar, salt and flour together several times.
2. Beat egg yolks, add flavouring and orange rind.
3. Beat in orange juice and oil alternately.
4. Mix in sifted dry ingredients.
5. Beat egg whites stiff and add baking powder.
6. Fold the first mixture into the egg whites.
7. Bake in 8" ungreased tube pan 30 minutes.
8. Invert to cool.

CHRISTMAS CAKE

1 lb. butter.
1 lb. brown sugar.
12 eggs.
1 lb. flour.
3 tsp. cinnamon.
1 tsp. mace.
2 tsp. allspice.
2 tsp. nutmeg.
½ tsp. cloves.
3 lb. raisins.
1 lb. currants.
½ lb. dates.
½ lb. shelled almonds.
1 lemon, juice and rind.
½ c. cold coffee (scant).
½ c. preserved fruit-juice (scant).
¾ lb. citron-peel.
¼ lb. lemon-peel.

1. Line the pans with three thicknesses of paper and butter the top layer only.

2. Seed the raisins and tear in quarters. Wash and dry currants. Stone the dates and cut in small pieces.

3. Blanch and chop the almonds. Cut the peel in thin slices and then in small pieces.

4. Mix the nuts and fruits (except peel) and dredge with 1/3 c. flour.

5. Dredge the citron and lemon peel with flour.

6. Mix and sift remaining flour with spices.

7. Cream the butter. Add sugar, yolks of eggs well beaten, and whites beaten stiff.

8. Add lemon-juice and rind and beat thoroughly.

9. Add liquid and sifted flour alternately. Beat well and then add fruit.

10. Put a layer of the mixture into a pan, then a layer of the peel. Repeat until the pan is two-thirds full, having the cake mixture for the top layer.

11. Bake in a slow oven 250°-300° F. for 3-4 hr.

CAKE FROSTINGS

BUTTER ICING

2-4 tbsp. butter.
1-2 tbsp. water or milk.
1½ c. confectioner's sugar, or enough to thicken.
1 tsp. flavouring.

1. Cream butter; add liquid and sugar alternately until of right consistency to spread.
2. Add flavouring and beat well.
3. Spread on cake.

MOCHA OR COFFEE ICING

To the above, add 1 tbsp. dry cocoa, and instead of water add strong coffee.

ORANGE ICING

In the recipe for butter icing, substitute orange-juice for liquid and add grated rind of orange.

CHOCOLATE ICING

Add 1 sq. melted chocolate to recipe for butter icing.

UNCOOKED FROSTING

2 egg-whites.
2/3 tsp. cream of tartar.
Powdered sugar about 1-1½ c.
2/3 tsp. flavouring.

1. Add cream of tartar to unbeaten egg-whites and 1 c. of the powdered sugar.
2. Beat all hard for about 10 min. or until the mixture thickens.
3. Then gradually add enough sugar, while you continue beating, to make the mixture thick enough to spread on the cake.
4. Use any flavouring, and spread the frosting evenly on the cake.

NOTE.—The success of this frosting depends upon the beating before more than 1 c. of sugar is added.

Variation

For *Chocolate Frosting* add 1 sq. of melted chocolate to above rule.
For *Cocoanut Frosting* add ½ c. grated cocoanut to above rule.

CARAMEL ICING

2½ c. light-brown sugar.
1 tsp. butter.
1¼ c. cream (or evaporated milk).
1 tsp. vanilla.

1. Cook sugar and cream until it forms a soft ball in cold water (234° F.).
2. Add butter and vanilla.
3. Remove from fire and beat till right consistency.

FUDGE FROSTING

2 c. sugar.
2/3 c. milk.
2 sq. chocolate.
2 tbsp. corn syrup.
2 tbsp. butter.
1 tsp. vanilla.

1. Melt chocolate or break in small pieces.
2. Put sugar, milk, chocolate, and corn syrup into saucepan and cook slowly, stirring often till 234° F. is reached.

3. Add butter and set to cool.

4. When cooled to 110° F. add vanilla and begin to beat. Continue until a creamy consistency.

COMFORT FROSTING

2½ c. sugar.
½ c. light corn syrup.
½ c. water.
2 egg-whites.
1½ tsp. vanilla.

1. Cook together sugar, syrup, and water until temperature of 248° F. is reached.
2. Beat egg-whites with Dover beater until stiff.
3. Add syrup slowly, beating constantly. (A wire whisk makes the beating easier when it begins to stiffen.)

SEVEN-MINUTE FROSTING

2 tbsp. cold water.
⅛ tsp. cream of tartar.
Speck of salt.
1 egg-white, unbeaten.
¾ c. granulated sugar.
1 tsp. extract.

1. Put hot water in the lower part of a double-boiler.
2. Put the top part over the hot water.
3. Set the double boiler over a flame and heat it until the water in the lower part boils.
4. Put all ingredients except vanilla in the upper part of the double boiler.
5. Immediately begin to beat the mixture with a wheel egg-beater. Continue to beat it for 7 min.
6. Lift the top part of the double boiler out of the lower part. Pour the hot water out of the lower part and add cold water.
7. Return the upper part of the double boiler to the lower part.
8. Let the frosting cool for about 5 min.
9. Add the extract. Beat it into the sugar mixture. Spread the frosting on the cake.

BROILED ICING (MEDIUM SIZE CAKE)

2 tbsp. butter.
½ c. sifted brown sugar.
2 tbsp. cream.
½ c. chopped nuts or cocoanut or cut gumdrops.

1. Mix fat, sugar, cream and nuts together.
2. Spread over warm or cooled cake.
3. Broil 4 inches from heat unit for 2 minutes.

SIMPLE FROSTING

Place a lace-paper doily on top of a cake or gingerbread.

Press icing sugar through a fine strainer, using a teaspoon. Sift it on to the doily so that the holes of the doily are filled with the sugar.

Lift the doily up and off carefully so that you do not smear the design.

COOKIES

Drop Cookies

ROLLED OAT CRACKLES

1 c. flour.
¼ tsp. soda.
½ tsp. salt.
1 c. rolled oats.
1 c. cocoanut.
½ c. fat.
½ c. brown sugar.
¼ c. water.
1 tsp. vanilla.

1. Use muffin (or cake) method of mixing.
2. Drop by spoonfuls on a greased baking-sheet.
3. Press into very thin wafers with a fork.
4. Bake at 360° F. until a delicate brown.
5. Remove from the pan immediately.

NOTE.—This recipe makes 4 doz. cookies—Rice Krispies may be used in place of cocoanut.

OATMEAL DROP COOKIES (INEXPENSIVE)

1 egg.
½ c. sugar.
½ tsp. salt.
¼ tsp. vanilla.
2/3 tbsp. melted fat.
1 c. rolled oats, or
½ c. rolled oats and 1/3 c. shredded cocoanut, or
½ c. rolled oats and 1/3 c. chopped nuts.
¼ c. chopped dates may be added.

1. Beat egg till light.
2. Add sugar gradually.
3. Add salt, fat, and flavouring.
4. Add remaining ingredients.
5. Drop in spoonfuls on baking-sheet.
6. Bake in moderate oven (360° F.) till delicately browned. Remove from pan at once.

UNBAKED CHOCOLATE OATMEAL CRUNCHIES

½ c. cocoa.
½ c. milk.
½ c. butter.
2 c. sugar.
1 c. cocoanut.
3 c. oatmeal.
1 tsp. vanilla.

1. Boil the first four ingredients in a pan for 5 minutes.
2. Stir in the cocoanut, oatmeal and vanilla.
3. Place on waxed paper by teaspoonfuls and allow to cool.
4. This recipe makes 3 dozen.

CHOCOLATE DROP COOKIES

1 c. brown sugar, less 2 tbsp.
¼ c. shortening.
2 eggs.
6 tbsp. cocoa.
1 c. flour.
½ tsp. cinnamon.
f.g. salt.
1 tsp. baking-powder.
Juice and rind of ½ lemon or ½ orange.
1 c. rice krispies.

NOTE.—If orange is used, slightly more flour will be needed.

1. Follow cake method of mixing.
2. Drop by teaspoonfuls on a greased baking-sheet.
3. Bake at 375° F.

This recipe makes 5 doz. cookies.

PEANUT BUTTER COOKIES

1 c. butter.
¾ c. brown sugar.
¾ c. white sugar.
2 eggs.
1 c. peanut butter.
2 c. flour.
2 tsp. soda.
Salt.

1. Cream the fat together.
2. Add sugar and well beaten eggs.
3. Add sifted flour, salt and soda.
4. Roll into balls, flatten with a fork, bake at 350° F. for 10-15 minutes.

HERMITS

5 c. + flour.
2 tsp. soda.
1 tsp. nutmeg.
1 tsp. cinnamon.
¼ tsp. salt.
2½ c. brown sugar.
1 c. butter.
4 eggs.
2 c. dates.
2 c. raisins.
1 c. nuts or sliced orange-peel.
4 tbsp. sour milk.

1. Measure and sift dry ingredients.
2. Cream butter and add sugar gradually. One-half the sugar may be added to the beaten eggs.
3. Beat eggs until light and add to butter and sugar.
4. Add dry ingredients, milk and nuts or orange-peel, raisins and dates, stoned and cut.
5. Drop from a teaspoon on a buttered baking-sheet 1 inch apart.
6. Bake in a moderate oven (360° F.) 12-15 min.

Note.—It is best to test one cookie to see that it holds its shape while cooking. If it spreads, a little more flour should be added.

ROLLED OATS DROP COOKIES

½ c. flour.
¼ tsp. baking-powder.
⅛ tsp. baking-soda.
f.g. salt.
½ c. rolled-oats.
½ c. rice krispies.
¼ c. fat.
1 egg (small).
½ c. brown sugar.
½ tsp. vanilla.

1. Set oven at 375° F.
2. Grease pans.
3. Sift flour, measure, add baking powder, soda and salt, then sift together into bowl.
4. Add rolled oats and rice krispies.
5. Melt fat.
6. Beat egg.
7. Add sugar to egg and beat well.
8. Add fat and egg mixture to flour mixture.
9. Drop by spoonful on cookie sheet.
10. Bake 8 to 10 minutes.
11. Remove cookies to cake rack to cool.

GINGER SUGAR COOKIES

¾ c. shortening.
1 c. sugar.
¼ c. light molasses.
1 egg.
2 c. sifted flour.
¼ tsp. salt.
2 tsp. soda.
1 tsp. cinnamon.
1 tsp. cloves.
1 tsp. ginger.

1. Set oven at 375°.
2. Grease cookie sheets.
3. Sift dry ingredients together.
4. Cream shortening and sugar.
5. Add molasses and egg, and beat well.
6. Add sifted, dry ingredients.
7. Roll in balls and roll in sugar.
8. Flatten with a tumbler dipped in sugar.
9. Bake 10-15 minutes.

This recipe makes 6 dozen cookies.

WHITE COCOANUT MACAROONS

3 egg-whites.
1 c. white sugar.
2 tbsp. corn-starch.
¼ tsp. salt.
2 c. cocoanut.
1 tsp. vanilla.

1. Add corn-starch and sugar well sifted to well-beaten egg-whites.
2. Beat well till sugar partly dissolves.
3. Put over double boiler. Cook, stirring constantly till mixture coats spoon thickly and sugar-grains have disappeared.
4. Add cocoanut and vanilla.
5. Drop on to well-greased pans, about 2 inches apart. (Do not make too large.)
6. Bake in a slow oven till thoroughly cooked.

CORN-FLAKE MACAROONS

2 egg-whites.
¾-1 c. sugar.
1 tsp. vanilla.
2 c. corn-flakes.
1 c. cocoanut.

1. Beat egg-whites till stiff.
2. Add sugar gradually.
3. Add flavouring.
4. Stir in corn-flakes and cocoanut.
5. Drop in spoonfuls on greased pan.
6. Bake in moderate oven.

RAGGED ROBINS

½ lb. dates.
½ c. glazed cherries.
1 c. walnuts.
1¾ c. corn-flakes.
2 egg-whites.
½ c. granulated sugar.
f.g. salt.
¼ tsp. vanilla.

1. Beat egg-whites stiff. Add vanilla and salt to egg-whites.
2. Mix dry ingredients and add to egg-whites.
3. Drop 2 inches apart on buttered baking-sheet.
4. Bake in a moderate oven (325° F.) for about 15 min.

PORCUPINES

20-24 dates.
2 egg-whites.
2/3 c. sugar.
Shredded cocoanut.

1. See to oven.
2. Grease pans.
3. Wash dates and cut in half lengthwise.
4. Beat egg-whites until stiff.
5. Add sugar gradually.
6. Drop a piece of date in egg-white mixture and coat lightly. Lift out with spoon and drop into cocoanut.
7. Place "porcupine" on greased pan and bake in a moderate oven until delicately browned.

ICE-BOX COOKIES

4 c. flour.
1 tsp. soda.
1 tsp. baking-powder.
Pinch of salt.
2 c. light-brown sugar.
1 c. butter.
1 tsp. vanilla.
2 eggs.
Walnuts, if desired.

1. Sift flour and measure (keeping separate the fourth cup).
2. Add soda, baking-powder, and salt, and sift again.
3. Cream butter.
4. Add one-half the sugar and cream until smooth.
5. Beat eggs slightly and add the other half of the sugar and vanilla.
6. Add dry ingredients (including the 3 cups of flour and nuts).
7. Knead in as much of the fourth cup of flour as possible so as to be able to roll thin.
8. Place overnight in the ice-box.
9. These may be sliced or rolled thin on a lightly floured board and cut with a cutter.
10. Bake in a moderate oven (350° F.).
11. Just before serving, Date Filling may be added if desired.

OATMEAL COOKIES II

3 c. rolled oats.
1 c. brown sugar.
¼ c. boiling water.
½ tsp. salt.
1 c. flour.
1 c. shortening.
1 tsp. soda.

Mix the rolled oats with the sugar and flour; add melted butter and mix well. Dissolve soda in boiling water and add to mixture. Form the dough into a roll and chill thoroughly (overnight). Slice thin and bake ten minutes at 350° F.

Rolled Cookies

SUGAR COOKIES

2½ c. flour.
3 tsp. baking powder
¼ tsp. salt.
1 c. sugar.
½ c. fat.
2 eggs.
1 tbsp. milk.
1 tsp. vanilla or lemon.

1. Mix according to general rules.
2. Roll a little at a time on a *lightly* floured board; cut in shapes; sprinkle with sugar.
3. Bake in a moderate oven (350° F.) 10-15 min.

OATMEAL COOKIES, I

2 c. pastry-flour.
1½ tsp. soda.
½ tsp. salt.
2 c. brown sugar.
7 c. oatmeal or rolled oats.
1 c. fat.

Cold water to wet sufficiently to roll.

1. Sift dry ingredients.
2. Cut or rub in fat as for biscuits.
3. Mix like pie-paste, adding only enough water to make dough hold together. (Do not have wetter than necessary.)
4. Roll very thin, using very little flour on the board.
5. Cut and bake 10-12 min. in a moderate oven. (Makes 150 cookies.)

DATE FILLING FOR ABOVE

1. Stone and cut finely 2 lb. of dates. (Remove stem ends.)
2. Add enough water to keep from burning; cook until soft. Add 1 tbsp. sugar. Lemon may be added, if desired.
3. Add vanilla to taste.
4. When cool, spread between oatmeal cookies. (NOTE.—Fill cookies on the day you wish to use them as they soften if left filled too long.)

ROLLED OAT COOKIES, II

2 c. flour.
1 tsp. soda.
Pinch of salt.
1½ c. oatmeal.
1 c. butter.
1 c. brown sugar.

Enough cold water to wet sufficiently to roll—about 3 tbsp.

1. Sift flour and add soda and salt, and sift again.
2. Cream butter and sugar.
3. Add oatmeal and flour, salt and soda.
4. Add water to wet.
5. Roll in small lots until thin on lightly floured board.
6. Cut in desired shapes and cook at 350° F.
7. Just before serving, cookies may be placed one over the other with a Date Filling between.

Bar Cookies

MATRIMONIAL CAKE

Filling

2 c. dates.
1 c. boiling water.
1 tbsp. brown sugar
Lemon.

1. Wash dates. Stone and cut in pieces.
2. Add brown sugar and boiling water.
3. Cook until smooth.
4. Add lemon and cool.

Rolled Oats Mixture

1¼ c. rolled oats.
1¼ c. white flour.
½ c. brown sugar.
1 tsp. soda.
¾ c. butter.

1. Sift flour and measure. Add soda and sift again.
2. Cream butter and sugar.

3. Add rolled oats and flour mixture and crumb together.
4. Grease pan well and press about one-half of mixture into the bottom of the pan.
5. Spread on date-paste.
6. Put on rest of mixture and press down.
7. Bake in a moderate oven (350° F.).

DATE BARS

1 c. flour.
2 tsp. baking-powder.
¼ tsp. salt.
1 egg.
1 c. sugar.
½ c. milk.
¾ c. dates.
1 c. chopped nuts.

1. Sift flour and measure. Add baking-powder and salt and sift again.
2. Beat eggs till light. Add sugar and milk.
3. Add dry ingredients, also nuts and dates.
4. Turn into oblong pan or square pan 9 by 9 inches.
5. Bake at 350° F. for 25-30 min.
6. When baked, cut in narrow strips 1 by 4½ inches.
7. Roll each strip in powdered sugar.
8. Store in a tightly covered tin box.

These cakes have a fine flavour after they have been stored for a few days.

BROWNIES

½ c. pastry-flour.
1 tsp. salt.
¼ c. shortening.
1 c. sugar.
2 eggs.
2 squares chocolate.
½ tsp. vanilla.
¼-½ c. walnuts.

1. Sift flour and measure. Add salt.
2. Cream shortening and add half the sugar, stirring till creamy.
3. Add melted chocolate.
4. Beat eggs till light, and add the remainder of the sugar to the eggs. Add to mixture and mix thoroughly.
5. Add flour and salt, walnuts, and vanilla.
6. Spread ¾ in. thick in a buttered, shallow pan.
7. Bake in a moderate oven—350° F. for 30 min.
8. Cut in squares while hot. Remove from the pan to the cake-cooler.

Yield approximately 30 squares.

WALNUT SQUARES

First Part:

2 c. flour.
¾ c. butter.
¼ c. brown sugar (sifted).

1. Cream butter and sugar.
2. Add sifted flour.
3. Pack in a tin about 9 inches square and bake at 300°-325° F. for 15-20 min.

Second Part:

2 eggs.
1½ c. brown sugar.
½ c. cocoanut.
1 c. chopped walnuts.
2 tbsp. flour.
1 tsp. baking-powder.
Pinch of salt.
Few drops of vanilla.

1. Sift brown sugar and mix with flour, baking-powder, and salt.
2. Add cocoanut, chopped walnuts, vanilla, and beaten eggs.
3. Pour over first part and bake at 300°-350° F. for 40 min.

CHINESE CHEWS

¾ c. flour.
1 tsp. baking-powder.
¼ tsp. salt.
2 eggs.
1 c. white sugar.
1 c. walnuts.
1 c. dates.

1. Sift flour and measure. Add baking-powder and salt and sift again.
2. Beat eggs until light.
3. Add sugar and dry ingredients.
4. Add walnuts and dates, chopped.
5. Press into a greased pan (8 by 8 inches).
6. Cook in a slow oven (300°-325° F.) for 20-25 min.
7. When a crust forms (after about 15 min.) it is advisable to mix the crust into the softer centre portion with a fork.
8. Replace in oven and cook 10-15 min. longer; then repeat No. 7
9. When cooked, lift out in spoonfuls and roll in the palm of the hand.
10. Roll in powdered sugar and store in a covered tin box.

QUESTIONS

1. From what section of our country does most of our flour come?
2. What classification of flour mixtures have we?
3. Give the proportions of liquid and flour in the various flour mixtures.
4. What are the differences between all-purpose flour and pastry-flour?
5. What kind of flour would you use for making muffins? For bread? For baking-powder biscuits? For cake?
6. What is a drop batter? A soft dough? Name an example of each.
7. What is meant by "hot breads"?
8. What causes tunnels in muffins?
9. Explain how baking-powder makes muffins light.
10. How much baking-powder should you use for 1 cup of flour?
11. How much soda do you use for a cup of sour milk?
12. What is a leavening agent? Name three.
13. When sour milk is substituted for sweet milk in a recipe, what changes do you make?
14. What is carbon dioxide? Name four ways in which we can produce it.
15. Give the proportions and methods of making muffins.
16. What is the difference between the muffin method and the cake method of mixing?
17. Which is the quicker method? Which method gives the finer texture?
18. Is toast easier to digest than bread? Why?

19. Why are "hot breads" difficult to digest?
20. Give proportions and directions for making baking-powder biscuits.
21. At what temperature should you bake muffins? Biscuits?
22. What is the secret of making good baking-powder biscuits?
23. Name the leavening agents used with sweet milk. With molasses. With sour milk.
24. Give the general rules for making a cake with butter. Without butter.
25. What are some of the causes of cake failures?
26. What effect has too much sugar on the texture of cake? Too much flour? Too much fat?
27. What is the food value of butter cakes?
28. What is their place in the diet?
29. What is the leavening agent used in a sponge cake? Explain the action.
30. In substituting baking-powder for eggs in a sponge-cake rule, what quantity would you use for each egg omitted?
31. How could you use the yolks of eggs left after making a white layer cake?
32. How should fruit be added to a cake mixture?
33. How should spices be added to a cake mixture?
34. What temperature is used in baking sponge cakes? Loaf cakes?
35. What is the result of too much handling in rolling cookies?
36. Why should cookies be cut close together?
37. Does the dough that is trimmed off and rerolled make as good and tender cookies as that which is rolled once?
38. How would you test a cake to see if it is done?
39. What foodstuffs are found in flour mixtures?
40. Is the habitual use of hot breads to be recommended? Why?
41. What is the protein of bread-flour called?
42. Why is gluten so valuable in bread-making?
43. Explain the action of yeast in bread-making.
44. Give two tests that will tell when bread is baked.
45. At what temperature will you bake bread? Rolls?

STIFF DOUGHS

PASTRY

PLAIN SHORT PASTRY

(One Shell)

1 c. flour.	¼-½ tsp. salt.
1/3 c. fat.	Cold water.

(For Two Shells)

1½ c. flour.	½ tsp. salt.
½ c. fat.	Cold water.

Standard Method

1. Have all materials cold as possible. (Pastry-flour should be used.)
2. Sift dry ingredients .
3. Cut in fat with two knives, or use a pastry blender.
4. Using a knife, mix in just enough water to make a stiff dough.

5. Bake shell on the outside or inside of plate, pricking so that it may keep its shape.

6. Bake in a very hot oven—12 min. for a shell, 40 min. for a double crust.

NOTE.—If two crusts are used, moisten the edge of the lower crust with cold water; then fill and place the upper crust over the pie, pressing the edges together with the back of the fork. Make incisons to allow the steam to escape.

PASTE METHOD OF MIXING

2¼ c. sifted flour.
1 tsp. salt.
¾ c. fat.
5 tbsp. water.

Mix flour and salt in bowl. Cut fat into flour with pastry blender or two knives until the pieces are the size of peas. Blend together 1/3 cup of this mixture and 5 tablespoons water. Add to remaining fat-flour mixure and mix, using fork or fingers until dough holds together. Shape into a round flat mass.

HOT WATER METHOD OF MIXING

1. Sift ½ teaspoon baking powder with salt and flour.

2. Melt shortening in 1/3 cup boiling water over low heat; cool slightly and stir in the sifted dry ingredients; chill thoroughly.

CEREAL CRUST

4 c. cornflakes.
¼ c. sugar.
1/3 c. melted butter.

1. Roll cornflakes with rolling pin.

2. Combine ingredients; press mixture into a greased pie plate and chill.

15 MINUTE APPLE PIE

2 lbs. apples (4 or 5).
1 c. granulated sugar.
¼ tsp. cinnamon.
⅛ tsp. nutmeg.
⅛ tsp. salt.
2 tbsp. flour.
1 tbsp. lemon juice.
1 tbsp. melted butter.

Grate the peeling from the apples into a bowl. Quarter and cut apples in 1/16 inch slices and place in a heavy skillet or saucepan. Combine sugar, spices, flour, salt and apple peel. Mix with apple slices. Cover tightly and steam over low heat until the apples are soft but not done.

Spoon hot apples into an unbaked crust. Cover with top crust. Press edges together firmly. Slash top for steam escape.

Bake in a very hot oven—450° F. for 15 minutes.

APPLE PIE

4-5 apples (sour).
1/3-½ c. sugar.
⅛ tsp. salt.
¼ tsp. cinnamon or nutmeg.
1 tsp. butter.
2 tbsp. water if apples need it.

1. Wash, pare, and slice the apples.

2. Line the pie-plate with pastry and fill with sliced apples.

3. Mix sugar, salt and spices, and sprinkle over the apples.

4. Cover with upper crust, following general rules.

DEEP APPLE PIE (ENGLISH)

Use same ingredients as above, omitting bottom crust.

RHUBARB PIE

6-8 stalks rhubarb.
Flour.
1 c. sugar.
Powdered sugar.

1. Cut rhubarb into small pieces, removing strings.
2. Flour rhubarb until quite white.
3. Line a pie-plate with pastry.
4. Fill shell with rhubarb and add sugar.
5. Add top crust and follow general rules.
6. When cooked sprinkle with powdered sugar.

PUMPKIN PIE

1½ c. stewed and sifted pumpkin.
1 c. scalded milk.
½ c. sugar.
½ tsp. salt.
½ tsp. ginger.
1 tsp. cinnamon.
1 egg.

1. Beat egg slightly.
2. Mix ingredients in the order given.
3. Line a pie-plate with pastry, put on rim, and pour in the mixture.
4. Bake in a hot oven to start cooking of the pastry, 450° F.; then reduce the heat to 325° F. to cook the custard.
5. When a knife comes out clean the custard is cooked.

NOTE.—Shell may be baked a litte first to prevent filling from making it soggy.

LEMON PIE

¼ c. cold water.
1¼ c. boiling water.
½-¾ c. sugar.
1 large lemon, rind and juice.
1 egg, or, if desired richer, 2 eggs.
4 tbsp. corn-starch.
½ tsp. salt.

1. Mix corn-starch and cold water.
2. Add boiling water and cook directly over the fire, stirring constantly until mixture thickens.
3. Cook in double boiler 15-20 min. to cook starch-grains thoroughly.
4. Add sugar and stir until dissolved.
5. Add egg-yolk, rind, and lemon-juice mixed together.
6. Cook 3 min. longer.
7. Pour into cooked shell. Let cool.
8. Cover with meringue and brown in slow oven.

MERINGUE

1 or 2 egg-whites.
2-3 tbsp. powdered sugar.
⅛ tsp. cream of tartar.

1. Beat eggs until stiff; gradually beat in the sugar.
2. Pile lightly on top of filled crust.
3. Cook in hot oven 450° F., for 3-5 minutes.

CUSTARD PIE

2 eggs.
¼ c. sugar.
¼ tsp. salt.
2 c. hot milk.
¼ tsp. vanilla, *or*
Few gratings nutmeg.

1. Beat eggs slightly; add sugar and salt.
2. Add milk; strain; cool; add flavouring.
3. Pour into pie-plate lined with pastry.
4. Place in a *hot* oven to start the cooking of the pastry; then reduce the heat to a lower temperature for custard. Bake until custard is firm. Temperature 450° F. for 15 min., reduce to 325° F.
5. The custard is cooked when a knife comes out clean.

Variations

Cheap Custard Pie.—Use 1 tbsp. corn-starch or 1 tbsp. flour in place of 1 egg in making the custard. Make the same as corn-starch pudding and pour into the cooked shell.

Chocolate Pie.—Add ¼ square Baker's chocolate (melted) to the custard pie recipe.

Cocoanut Pie.—Add ½ c. of cocoanut to the custard pie recipe before baking.

NOTE.—Cream may be added in any of the variations if a richer custard is desired.

QUESTIONS

1. Give the proportions for pastry.
2. Name three things that should be observed if one wishes to make good pastry.
3. At what temperature should a double-crust pie be cooked?
4. Would it be wise to serve apple pie with roast pork? Why?
5. Give detailed instructions for the making and cooking of a meringue.
6. What causes water-drops on the top of a meringue?
7. What makes a meringue tough?
8. Why do you cook the filling for a lemon pie in a double boiler?
9. What is meant by a "deep apple pie"?

DESSERTS

CUSTARDS—GENERAL RULES

1. Mix eggs thoroughly, but do not beat light.
2. To these add sugar and salt, and then the hot milk slowly.
3. Strain; cook in a pan of hot water at 325° F.
4. Test: *(a)* For Baked or Steamed Custard insert a knife. If it comes out clean the custard is cooked. *(b)* For Soft Custard. When mixture coats a spoon the custard is cooked.

STEAMED OR BAKED CUSTARD

1 pt. milk.
2 eggs.
2-3 tbsp. sugar.
f.g. nutmeg, or
¼ tsp. vanilla, or
2 tbsp. caramel.
¼ tsp. salt.

Prepare according to general rules.

NOTE.—In baking a large amount use 3 eggs to 1 pt. of milk.

CARAMEL

1 c. sugar. 1 c. boiling water.

1. Place sugar in pan and heat gradually until melted, stirring constantly to prevent burning.
2. Add water and boil 5 min. Pour into sterile bottle.

Variation

One-half ounce unsweetened chocolate may be melted and mixed with the milk for chocolate custards.

SOFT CUSTARD

2 c. milk. 2-3 tbsp. sugar.
4 yolks of eggs. ¼ tsp. salt.
½ tsp. vanilla.

1. Follow general rules for mixing.
2. Cook over hot water, stirring constantly, until thick enough to coat a silver spoon; strain, cool, and flavour.

FLOATING ISLAND

1 pt. milk. 2-3 tbsp. sugar.
4 eggs. Salt.
½ tsp. vanilla.

1. Scald the milk in a double boiler.
2. Separate the eggs, beating the whites until stiff but not dry.
3. Fold into the beaten whites 2 tbsp. sugar. Carefully cook in the hot milk 2 or 3 min.

Or meringue may be dropped on the surface of hot water in a shallow pan and cooked over medium heat until firm.

4. Remove them with a large spoon to a serving-dish.
5. Beat the yolks until lemon-coloured and add the remainder of the sugar and salt.
6. Add hot milk slowly to beaten yolk mixture and cook over hot water, stirring constantly until the mixture lightly coats a silver spoon.
7. Pour this custard sauce over the whites in the serving-dish. Serve cold.

ORANGE CUSTARD

2 c. soft custard. 2 tbsp. fruit sugar.
4 sweet oranges.

1. Peel oranges; divide into sections; remove the thin skin completely from each section.
2. Place in serving-dish; sprinkle with sugar; chill.
3. Cool the custard; pour over oranges.
4. Garnish with meringue or whipped cream. Bananas or peaches may be substituted for oranges.

BREAD AND BUTTER PUDDING

Bread. 2-4 tbsp. sugar.
2 c. hot milk. ¼ tsp. salt.
1 egg. 2 tbsp. butter.
½ tsp. vanilla.

1. Cut stale bread into 1/3-inch slices; spread with butter and cut in ½-inch strips.
2. Place strips in buttered baking-dish.
3. Sprinkle layer with a few raisins, washed and stoned.
4. Place second layer of bread-strips in opposite direction; repeat until dish is two-thirds full, having buttered bread on top.
5. Pour in raw custard to nearly fill the dish; let stand ½-1 hr.; cook in the oven in a pan of hot water at 325° F.
6. Pudding is cooked when a knife comes out clean.

CHOCOLATE BREAD PUDDING

Variations

Add to Bread and Butter Pudding:—

1 oz. chocolate. 2 tbsp. sugar.

1. Melt chocolate over hot water; add milk mixture very slowly.
2. Finish as Plain Bread Pudding.

LEMON BREAD PUDDING

Add to Bread and Butter Pudding:—

1 tbsp. lemon-juice. ½ tbsp. grated lemon-rind.

TRIFLE

2 c. stale cake. 1/3 c. fruit-juice.
Fruit (6-8 halves of peaches). 2 c. soft custard.

1. Cut cake in uniform pieces, according to shape of serving-dish; arrange in dish.
2. Sprinkle with fruit-juice.
3. Add fresh or cooked fruit cut in pieces.
4. Make soft custard; cool and pour over fruit and cake.
5. Garnish with meringue or whipped cream, cherries or red jelly. Blanched almonds and raspberry jam may be added.

RICE CUSTARD

2 c. milk. 2 eggs.
2/3 c. cooked rice (3½ tbsp. uncooked). ½ c. sugar.
½ tsp. salt.
1 tsp. flavouring.

1. Add the beaten egg to the rice mixed with milk and the other ingredients.
2. Bake as a plain custard.

TAPIOCA CUSTARD PUDDING

3 tbsp. sugar. ½ tsp. vanilla.
2 c. milk. 1 egg yolk.
3 tbsp. minute Tapioca. 1 egg white.
⅛ tsp. salt. 2 tbsp. sugar.

1. Add milk to Tapioca and cook in double boiler until milk thickens.
2. To beaten egg yolk, sugar and salt add a little of the hot mixture. Return to the double boiler and cook three minutes longer.

3. Beat egg white until foamy. Add 2 tbsp. sugar and beat until it stands in peaks.

4. Fold in first mixture, add vanilla and serve.

PRUNE RICE PUDDING

1 egg.
½ c. light-brown sugar.
1 tbsp. melted butter.
⅛ tsp. salt.
1 tsp. vanilla.
1 c. unsweetened prune-juice.
3 c. boiled rice.

1. Beat egg slightly. Add sugar, salt, vanilla, butter, and prune-juice.

2. Pour this mixture over boiled rice which has been placed in a greased baking-dish.

3. Bake in a hot oven of 400° F. for about 30 min.

4. Chill and top with whipped cream and several whole prunes.

LEMON PUDDING

½ c. sugar.
1 tbsp. flour.
Salt.
1 c. sweet milk.
2 egg-yolks.
Juice and rind of 1 lemon.
2 egg-whites.

1. Beat egg-whites stiff.

2. Add dry ingredients.

3. Add egg-yolks, milk, and lemon.

4. Bake in a slow oven of 325° F. in a pan of water.

COTTAGE PUDDING

1¾ c. flour.
3 tsp. baking-powder.
½ tsp. salt.
2/3 c. sugar.
¼ c. butter.
1 egg.
½ c. milk

1. Mix according to Cake Method.

2. Pour into greased pudding-moulds and steam 45 min., or bake in a loaf-tin in the oven 30—40 min.

Variations

1. Add to the batter ¼ c. raisins, currants, dates or figs, floured.

2. Add to the batter 2 tbsp. marmalade.

3. Place a thick layer of sliced apples in bottom of mould. Sprinkle with sugar and nutmeg; pour batter over and steam.

4. For *Ginger Pudding* sift ¾ tsp. of ginger with flour.

APPLE COBBLER

3 tart apples.
1/3 c. sugar.
1 c. raisins.
1 tbsp. butter.
½ c. sugar.
1 c. flour.
2 tsp. baking-powder.
¼ c. milk.
1 egg.
2 tbsp. melted butter.
1 tsp. vanilla.

1. Place the first *four* ingredients in a buttered baking-dish.

2. Mix the remaining ingredients according to the Muffin Method and pour over apple mixture.

3. Bake in a moderate oven of 400° F.

CORN-STARCH DESSERTS

General proportions for Corn-starch Desserts are 1½ tbsp. to 2 tbsp. Corn-starch, mixed with 2 tbsp. cold milk and added to 1 c. hot milk.

BLANC MANGE

2 c. scalded milk.
3—4 tbsp. corn-starch.
2—4 tbsp. sugar.
⅛ tsp. salt.
1 tsp. vanilla.

1. Mix starch, sugar, and salt.
2. Stir in the milk and cook in double boiler until there is no taste of raw starch—20-30 min.

Variation

For *Chocolate Corn-starch Pudding* use 3 tbsp. of corn-starch instead of 4, 1/3 c. sugar in place of 2 tbsp., and add 1 sq. of chocolate or 3 tbsp. cocoa.

CARAMEL PUDDING

¾ c. sugar (granulated)
½ c. boiling water.
3 c. scalded milk.
4½ tbsp. corn-starch.
⅛ tsp. salt.
1 egg.
½ tsp. vanilla.

1. Caramelize ½ c. sugar. Add boiling water gradually, and boil 10 min. (*See* Caramel Recipe.)
2. Mix the remainder of the sugar with salt and corn-starch. Add the hot milk gradually and return the mixture to the top of the double boiler.
3. Stir constantly and as the mixture begins to thicken, add the caramel.
4. Cook 20-30 min., stirring every 10 min.
5. Beat egg and add hot mixture.
6. Cook 5 min. longer.
7. Add flavouring, chill, and serve with cream and sugar.

LEMON SNOW

1½ c. water.
2/3 c. sugar.
3 tbsp. lemon-juice.
2 egg-whites.
3 tbsp. corn-starch.

1. Mix sugar and starch.
2. Add boiling water and cook until there is no taste of raw starch—20-30 min.
3. Add lemon-juice. Fold in the stiffly beaten whites. Mould and chill. Serve with Custard Sauce.

LEMON MIST PUDDING

Follow recipe for Lemon Pie, varying procedure by folding in beaten egg-whites after the mixture is lukewarm.

JUNKET

1 pt. milk.
1 junket tablet dissolved in ½ tbsp. water.
½ tsp. vanilla.
1 tbsp. sugar.
Salt.

1. Heat milk until lukewarm.
2. Add the other ingredients.

3. Pour into cups.
4. Let stand in a warm place until set. Do not jar.
5. Chill, and serve with fresh fruit.

Variations

1. For *Caramel Junket* add 2 tbsp. caramel flavouring and 1 additional tbsp. of sugar .
2. For *Fruit Junket* add sliced banana and chopped nuts.

CARROT PUDDING

1 c. flour.
½ tsp. soda.
1 tsp. salt.
¼ tsp. cinnamon.
⅛ tsp. nutmeg.
½ tsp. allspice.
1 c. brown sugar.
1 c. grated carrot.
1 c. grated potato.
1 c. bread crumbs.
1 c. raisins.
1 c. currants.
¾ c. suet finely chopped.
2 tbsp. sour milk.

1. Mix and sift dry ingredients. Add others in order given.
2. Turn into well-greased moulds.
3. Cover and steam—individual moulds, 1¼ hr.; large moulds, 3 hr.

BROWN BETTY

¼ c. sugar.
¼ tsp. cinnamon.
¼ lemon-rind grated.
2 tbsp. lemon-juice.
3 c. sliced apples.
¼ c. butter.
2 c. soft bread crumbs or graham crackers.
½ c. cold water.

1. Mix sugar, cinnamon, lemon juice and rind.
2. Melt butter and stir in the crumbs.
3. Butter a baking-dish; put in one-quarter of crumbs, one-half of apple, and sprinkle with one-half of sugar mixture.
4. Put another layer of crumbs, apple and sugar, and sprinkle the remaining crumbs on top.
5. Add water and bake slowly, covered at first.
6. When apples are soft, remove cover and brown crumbs.
7. Serve with cream or lemon sauce.
8. Ripe berries may be substituted for apples.

PUDDING SAUCES

LEMON SAUCE

¼ c. sugar.
1 tbsp. corn-starch, or
2 tbsp. flour.
1 c. boiling water.
1 tbsp. butter.
1 tbsp. lemon.
Grated lemon-rind.

1. Mix sugar and flour and add boiling water.
2. Cook over direct heat until no taste of raw starch (10-15 min.).
3. Remove from fire and add butter, lemon juice and rind.

BROWN SUGAR SAUCE

½ c. brown sugar.
1½ tbsp. flour.
1 c. boiling water.
1 tbsp. butter.
½ tsp. vanilla.

Prepare as Lemon Sauce.

VANILLA SAUCE

Same as Lemon Sauce, using 1 tsp. vanilla instead of lemon juice and rind.

CARAMEL SAUCE

Same as Lemon Sauce, using 2 tbsp. caramel instead of lemon juice and rind.

CUSTARD SAUCE

¾ c. milk.
Yolk of 1 egg.
1½ tbsp. sugar.
Salt.
1/6 tsp. vanilla.

1. Beat yolk of egg; add sugar and salt.
2. Add hot milk slowly, stirring constantly.
3. Cook over hot water, stirring until mixture coats a silver spoon.
4. Remove from heat; strain; add flavouring.

CHOCOLATE SAUCE

½ c. white sugar.
½ c. water.
1½–2 sq. chocolate.
¼ tsp. vanilla.

1. Melt chocolate over hot water.
2. Add one-half the sugar gradually.
3. Add boiling water slowly, then the remainder of sugar.
4. Cook until sugar is dissolved and sauce is thick.
5. Add flavouring.

MOCK MAPLE SYRUP

1 c. brown sugar.
¼ c. water.
1 tbsp. butter.
½ tsp. vanilla.

1. Boil the sugar and water 5 min.
2. Add butter and vanilla and serve hot or cold.

GELATINE DESSERTS

Gelatine is a hard, unpalatable, transparent substance, prepared from bones and other animal tissue. Cold water swells and softens gelatine; hot water dissolves it.

Gelatine contains protein. It does not, however, contain the same quality of protein as is found in meat, milk, and eggs. The protein found in gelatine is inferior to that found in milk, meat, and eggs.

Because gelatine is lacking in flavour it is usually sweetened with sugar and flavoured with acid or sweet fruit-juice. Gelatine is a more valuable food when it contains fresh fruit-juices, because the latter are generally rich in vitamins and mineral matter.

Since only a small quantity of gelatine is contained in one serving of the gelatine dish, the food is valuable chiefly for the sugar and fresh fruit-juice added to it.

Gelatine is very easily digested.

GENERAL RULES

1. Soak gelatine in cold water until it swells.

2. Make a syrup of boiling water and sugar. Boil 5 min. If using a prepared syrup from a canned fruit, boil only 1 min.

3. Pour over gelatine. Stir until dissolved and add flavouring. Boiling toughens gelatine.

4. Strain through a cheese-cloth which has been moistened with hot water.

5. Turn into a moistened mould and chill. Serve with sauce or whipped cream.

6. Do not use fresh pineapple sections or juice in making a gelatine dessert, as fresh pineapple contains an enzyme which breaks down the thickening-power of gelatine, causing a thin, watery mixture which will not thicken.

NOTE.—Gelatine mixtures should be kept covered, because gelatine is an ideal food for the growth of micro-organisms.

GENERAL PROPORTIONS

1 envelope of unflavoured gelatine (1 tbsp.) sets 2 c. liquid. With acid fruit added, use only 1¾ c. liquid. Packages of fruit-flavoured, sweetened gelatine have directions for making on the package.

Gelatine mixtures set at room temperature, will not melt when served at room temperature.

LEMON JELLY

1 tbsp. gelatine.
¼ c. cold water.
1 c. boiling water.
½ c. sugar.
Thin shavings of ¼ lemon-rind.
¼ c. lemon-juice.

Follow general rules.

NOTE.—When partly set, jelly may be beaten with Dover egg-beater until foamy.

This jelly may be used as a base for jellied fruits or salads.

ORANGE JELLY

1 tbsp. gelatine.
¼ c. cold water.
½ c. boiling water.
½ c. sugar.
¾ c. orange-juice.
1½ tbsp. lemon-juice.

Follow general rules.

COFFEE JELLY

1¼ tbsp. gelatine.
½ c. cold water.
½ c. boiling water.
1/3 c. sugar.
2 c. coffee infusion.

Follow general rules.

Sponges are gelatine desserts into which beaten egg whites are beaten. Commercially prepared jelly powders can be used as bases for sponges.

SNOW PUDDING

1 tbsp. gelatine.
¼ c. cold water.
2/3 c. boiling water.
Thin shavings of ¼ lemon-rind.
3 tbsp. lemon-juice.
2/3 c. sugar.
2 egg whites.

1. Prepare first six ingredients as in General Rules.
2. Chill; stir occasionally.

3. When partly set, beat until foamy; add whites of eggs beaten stiff, and beat until mixture begins to stiffen.

4. Turn into moistened mould, or pile lightly in serving-dish.

5. Serve with custard sauce.

NOTE.—1 white of egg and 1/3 c. cream, whipped, may be used instead of 2 whites.

PINEAPPLE SPONGE

1. Make as Snow Pudding, using 1 tbsp. lemon-juice and 2 tbsp. *canned* pineapple-juice; fold in ½ c. grated pineapple just before turning into mould.

Whipped cream is often served with gelatine desserts. Whipped evaporated milk may be used as a substitute and is not as rich as whipped cream.

For Whipping Canned Milk

Chill undiluted canned milk thoroughly; whip until stiff. Add 1 tbsp. lemon-juice for each ½ cup milk. Whip until very stiff. Sweeten to taste.

FROZEN DESSERTS

There are three types of frozen desserts:—

1. Sherbets.
2. Ice cream.
3. Mousses and parfaits.

There are two methods of freezing and stirring ice creams and sherbets. The crank freezer (hand) produces the best texture, due to more beating. The second method is freezing in the automatic refrigerator. The manufacturer's booklet, which comes with the refrigerator, contains recipes and directions for making ice cream.

METHOD OF MAKING ICE CREAM IN THE AUTOMATIC REFRIGERATOR

Ingredients, such as gelatine, eggs, flour or corn-starch are used in the mixture to prevent crystals forming. These are known as stabilizers.

Set the control for fast freezing.

Pour ice cream mixture into the refrigerator tray.

Place in freezing compartment.

Creamy Ice Cream

After the mixture has partly frozen (approximately ½ hour), turn into a chilled bowl and beat with a rotary beater until smooth. Fold in whipped cream and return to refrigerator tray. Freeze until firm, stirring occasionally.

GENERAL RULES FOR HAND FREEZER

1. Use rock salt and pound ice fine.

2. Scald can, dasher, and cover, and fit can into socket in pail.

3. Fill the space between the can and pail two-thirds full of ice before adding salt.

4. Add alternate layers of ice and salt, using eight measures of ice to one of salt, letting the mixture come a little above the height of the liquid in the can.

5. Never fill the can more than two-thirds full of the mixture to be frozen, to allow for expansion. Let stand until thoroughly chilled; turn crank very slowly

until cream is rather stiff, and then increase the speed until mixture is stiff and of a fine texture.

6. Remove the dasher, scrape cream from the sides of the can, and level.

7. Drain water from the tub, fit cork into cover, and repack with ice and salt. If time of ripening is short, use 4 parts ice to 1 of salt; if longer, use 8 to 1.

8. Cover with heavy sack or newspapers; let stand at least 1 hr. before using.

FRENCH VANILLA ICE-CREAM

2 c. milk.
1 tbsp. flour.
1 c. sugar.
¼ tbsp. salt.
1 qt. thin cream.
2 tsp. vanilla.
1 egg.

1. Measure all ingredients.
2. Mix together flour, sugar, salt, and egg.
3. Add scalded milk gradually.
4. Cook in double boiler until thickened, stirring constantly.
5. Cool; add cream and vanilla.
6. Strain, put into ice-cream freezer, and follow general rules.

VANILLA ICE-CREAM

1 qt. thin cream.
1 c. sugar.
2 tsp. vanilla.
Pinch of salt.

1. Scald one-half the cream and dissolve the sugar in it.
2. Add remaining cream and vanilla.
3. Follow general rules.

FRENCH FRUIT ICE-CREAM

4 c. fruit pulp and juice.
2 c. sugar.
4 c. thin cream.

1. Add sugar to fruit juice and pulp; let stand until dissolved.
2. Add cream and follow general rules for freezing.

MAPLE PARFAIT

1 c. maple syrup.
4 egg-yolks.
2 c. cream (whipped).

1. Heat syrup to boiling; add gradually to egg-yolks slightly beaten; cook over hot water as a soft custard.
2. Chill; fold in whipped cream.
3. Pour into mould, using 2 parts of ice to 1 part of salt.
4. Let stand 3-4 hours.

FRUIT SHERBET

3 oranges.
3 bananas.
3 lemons.
3 c. sugar.
3 c. water.
3 egg-whites.

1. Squeeze juice from oranges and lemons; mash bananas.
2. Add water and sugar, and stir until dissolved.
3. Put into freezer, and freeze, using 8 parts of ice to 1 part of salt.

4. When of the consistency of mush, open the top carefully and quickly stir in the egg-whites beaten stiff.

5. Repack and finish freezing.

QUESTIONS—DESSERTS

1. What is the difference between a Floating Island and a Baked Custard?
2. In each case, what is the proportion of eggs to 1 c. of milk?
3. Why do we strain custards?
4. Why do we bake custards in a pan of water?
5. What is the test for a soft custard? A steamed custard?
6. Which is the better source of energy, a steamed custard or a rice pudding?
7. What makes a soft custard curdle? Why does water come on the surface of a baked custard?
8. Give an example of a pudding where starch is used to help thicken a custard.
9. What are the standard proportions in making a Blanc Mange? How do you vary it to make Chocolate Blanc Mange?
10. Name four fruit desserts.
11. Explain in detail how to make Lemon Snow.
12. How do you separate the starch-grains in a Blanc Mange? How did you do it in making a Cream Sauce?
13. Name four desserts suitable for winter. For summer.
14. From what is tapioca obtained? Corn-starch? Rice? Gelatine?
15. What effect has boiling water on gelatine? Cold water?
16. What are the standard proportions in making gelatine desserts?
17. How does the protein in gelatine compare with that in milk?
18. What effect has fresh pineapple-juice on gelatine? Has canned pineapple the same effect?
19. Why is a sweet dessert served at the end of the meal?
20. Is it a good plan in a lunch-room (cafeteria) to have the desserts first in the line? why?
21. In planning a dessert for dinner, name three things that you would consider.
22. What proportion of ice to salt do you use in freezing ice-cream?
23. What is the difference between ice-cream and sherbet?

CANDY

Sugar exists in candy in concentrated form and is an energy—or fuel-giving food. However, it should not be eaten to excess nor before meals. If too much is eaten at a time, it is likely to ferment in the stomach and cause trouble.

GENERAL RULES

1. Use a small amount of corn syrup to prevent grainy candy.
2. If desired, substitute for corn syrup ⅛ tsp. cream of tartar, or ½ tsp. of lemon-juice to 2 c. of sugar.
3. Do not stir candy while boiling as it tends to crystallize the sugar.

NOTE.—Brown sugar and molasses contain an acid which, if used in candies with milk, causes the milk to curdle. Therefore, candy containing these two ingredients should be stirred while it is cooking.

4. When grains of sugar form on the sides of the pan, wash down with damp cheese-cloth on the end of a fork.

5. Cool candy before beating. Beating while hot causes large crystals to form and a grainy candy results.

6. Do not cool candy suddenly by placing in cold water as this tends to make it granular.

7. In substituting cocoa for chocolate in candy-making, use 3 tbsp. cocoa and 2/3 tbsp. butter instead of 1 square of chocolate.

8. Test candy, using water that is really cold. Place a few drops of syrup into the cold water. When the syrup is cooled by the water, it thickens and can be formed into balls of different degrees of hardness. A thermometer is a more reliable test.

Type of Candy	Temperature	Cold-water Test
Fudge—Penuchi, operas, maple creams	234° - 238° F.	Soft ball.
Fondant	238° - 240° F.	Soft ball.
Caramels	246° - 248° F.	Firm ball.
Taffies	265° - 270° F.	Hard ball.
Butter-scotch, toffee, etc.	290° - 300° F.	Crack.
Brittles	300° - 310° F.	Hard crack.
Clear hard candies	310° F.	Hard crack.

PEANUT BRITTLE

2 c. sugar.
3 c. unshelled peanuts.

1. Shell peanuts; remove skin; roll fine or leave whole.
2. Melt sugar in frying-pan; stir constantly and do not allow to darken.
3. When melted, pour over nuts on platter (not greased).
4. Cool gradually; mark in squares while cooling.

TAFFY

1½ c. brown sugar.
½ c. water.
1 tbsp. butter.
1 tsp. vinegar.

1. Mix sugar, water, and butter.
2. Stir only until sugar dissolves.
3. Add vinegar after taffy threads.
4. Cook until it cracks when dropped into cold water.
5. Pour on buttered pan; score before cold.

BUTTER-SCOTCH

2 c. brown sugar.
¼ c. corn syrup.
1½ tbsp. vinegar.
2½ tbsp. water.
¼ tsp. salt.
¼ c. butter.
2 tsp. vanilla.

1. Mix sugar, syrup, vinegar, water, and salt in saucepan.
2. Heat slowly, stirring until sugar is dissolved; boil, without stirring, to brittle stage (290° F.).
3. When syrup has nearly reached 290° F., add butter; add vanilla just before turning out.
4. Pour on buttered pan; mark into squares before cold.

MOLASSES TAFFY

1 c. white sugar.
1 c. brown sugar.
2 c. light molasses.
¼ c. butter.
⅛ tsp. soda.
¼ tsp. salt.
¾ c. water.

1. Put the sugars, molasses, and water into a saucepan and cook to 265° F. (hard-ball stage).
2. Cook the candy slowly and stir it during the latter part of cooking to prevent burning.
3. Remove from fire; add the butter, soda, and salt, and stir just enough to mix well. (Be sure soda is free from lumps.)
4. Turn into a greased pan and allow to stand until cool enough to handle.
5. Gather into a ball and pull until rather firm and of a light-yellow colour.
6. Stretch out in a long rope, cut into pieces, and wrap in waxed paper if it is to be kept.

MAPLE CREAM

3 c. light-brown sugar.
1 tbsp. corn syrup.
2/3 c. milk.
2 tbsp. butter.
½ c. chopped nuts.
½ tsp. vanilla.

1. Put sugar, syrup, milk, and butter into a saucepan; heat gently, stirring until the sugar is dissolved.
2. Boil, without stirring, to soft-ball stage—234° F.
3. Remove from heat; cool gradually; beat until creamy.
4. Add nuts and vanilla; pour into buttered pan.
5. Mark in squares before it hardens.

NOTE.—To overcome the acid of brown sugar which may cause curdling of the milk, a few grains of baking-soda may be added to the sugar.

CHOCOLATE FUDGE, I

1 c. white sugar.
1 c. brown sugar.
2 sq. chocolate.
1 tbsp. butter.
1 tbsp. corn syrup.
¾ c. milk.
1 tsp. vanilla.

Make as Maple Cream; cut chocolate into pieces and cook with sugar.

CHOCOLATE FUDGE, II (MORE EXPENSIVE)

1 c. white sugar.
1 c. brown sugar.
¼ c. syrup.
½ c. sweet milk.
¼ c. melted butter.

1. Boil 2½ min.
2. Add ¼ c. cocoa.
3. Boil till it forms a soft ball when dropped into cold water, then take from the stove and add 1 tsp. vanilla. Cool slightly.
4. Beat until creamy.
5. Pour in buttered pan and mark in squares.

DIVINITY

3 c. white sugar.
2/3 c. corn syrup.
¾ c. boiling water.
2 egg-whites.
½ tsp. vanilla.
½ c. chopped nuts.

1. Put sugar, syrup, and water into a saucepan.
2. Heat slowly; stir until sugar is dissolved.
3. Boil to firm ball stage—250° F.; cool slightly.
4. Beat whites stiff; gradually add the syrup.
5. Continue beating until mixtures begins to thicken.
6. Add nuts; pour into buttered pan.

Note.—Mixture may be dropped from a teaspoon on buttered pan; place bowl over hot water to keep mixture soft.

TURKISH DELIGHT, I

3 tbsp. granulated gelatine.
½ c. cold water.
2 c. sugar.
½ c. boiling water.
1 orange, rind and juice.
3 tbsp. lemon-juice.

1. Soften gelatine in cold water.
2. Make syrup of sugar and water; when boiling, add gelatine; boil gently 20 min. Although boiling toughens gelatine, in this confection the toughness is not objectionable.
3. Remove from heat; add fruit-juices; strain; add rind; candied fruit and chopped nuts may be added. Vegetable colouring may be added, if desired.
4. Pour into a moistened pan.
5. When firm cut into squares, using a knife dipped in hot water.
6. Roll in icing or fruit sugar.

TURKISH DELIGHT, II

1 pkt. gelatine (2 envelopes).
½ c. cold water.
4 c. sugar.
1 lemon grated rind and juice.
1 c. boiling water.
1 orange grated rind.

1. Soak gelatine in cold water.
2. Put sugar and boiling water in pan and stir until dissolved.
3. Boil 20 min., covered so no granules will form.
4. Pour syrup on gelatine.
5. Add rinds and fruit-juice.
6. Colour pink if desired, or omit orange and use other flavours.
7. Rinse tin in cold water.
8. Pour mixture into tin and let stand overnight.
9. Cut in squares and roll in icing-sugar or desiccated cocoanut which has been toasted in the oven.

SALTED ALMONDS OR PEANUTS

1 c. shelled almonds or peanuts.
2 tsp. butter or olive-oil.
Salt.

1. Blanch the almonds and dry them, or remove the thin brown skin from the peanuts.
2. Place nuts in shallow baking-pan; put butter or oil over them.
3. Brown in a moderate oven, stirring frequently.
4. Drain on unglazed paper; sprinkle with salt.

STUFFED DATES

Dates.
Nuts.
Peanut butter.
Butter icing.

1. Stone and clean dates.
2. Stuff them with nuts, peanut butter, butter icing made fairly stiff, or a combination of these.

NOTE.—The icing may be flavoured with lemon, orange, chocolate, or coloured slightly.

POPCORN BALLS

6 qt. popped corn.
1 c. molasses or corn syrup.
1 c. sugar.
¼ tsp. salt.

1. Popcorn must be dry before it will pop.
2. Just before popping, the kernels should be moistened by putting the corn in a strainer and letting the water run through. Drain.
3. Heat gradually and evenly, using only enough corn in the popper at one time to cover the bottom of it. One cup of unpopped corn will make 5 cups of popped corn.
4. Pick over the corn to remove unpopped kernels.
5. Put other ingredients in saucepan and stir to mix it.
6. Heat the mixture without stirring until the syrup is very thick and is brittle when dropped into cold water (270° F.).
7. Put the corn into a large bowl. Add the syrup and stir. Let stand 1 min.
8. Dip the hands in cold water. Shake the water off the hands and press some of the corn into a ball. Repeat until all the corn is shaped into balls.

CEREAL CANDY

2 c. sugar.
2/3 c. corn syrup.
3 tbsp. molasses.
½ c. water.
⅛ tsp. cream of tartar.
3 tbsp. butter.
¼ tsp. soda.
1½ c. rice crispies.

Crisp the cereal, if it needs it. Mix sugar, molasses, syrup, water and cream of tartar. Place over low heat and stir until the mixture begins to boil. Cook without stirring until brittle in cold water. Remove from heat, add soda, cereal and butter and stir until blended. Pour on a greased pan and when cool enough to handle shape into balls.

MARSHMALLOWS

1. Brown 1 c. finely desiccated cocoanut. Spread on board when cool.
2. In a large bowl put:—
   2 tbsp. gelatine.
   1/3 c. cold water.
3. In a saucepan put:—
   1½ c. sugar.
   ½ c. boiling water.
4. Place on stove and stir until sugar just dissolves.
5. Pour a little syrup over gelatine and stir well, then add remainder. Beat till very thick.
6. When nearly thick enough to hold its shape, add ½ tsp. vanilla.
7. When it will hold its shape, turn out on to cocoanut.
8. Cut in cubes and roll remaining sides in cocoanut.

Chocolate.—Add 1/3 c. cocoa and ¼ c. more water to syrup.

CHOCOLATE SNOWBALLS

For Centres

1. Mash 3 tbsp. hot potato. Add immediately 1 c. sifted icing sugar and 2 tsp. vanilla.
2. Add 2 c. more icing sugar or enough to make a mixture stiff enough to roll into balls the size of a small marble. Place on wax-paper to dry slightly.

For Coating

1. Place boiling water in the lower part of a double boiler.
2. In the top, place 4 oz. sweet chocolate to melt. Do not place on stove.
3. Dip centres into chocolate to coat and roll in desiccated cocoanut.

QUESTIONS—SUGAR AND CANDY

1. What two chief sources of sugar have we?
2. Describe the process of manufacturing raw sugar from the sugar-cane.
3. What is molasses?
4. What is granulated sugar? Powdered sugar? Icing-sugar? Maple sugar? Brown sugar?
5. What effect has corn syrup on the texture of candy?
6. What is there in brown sugar and molasses that may cause milk to curdle in the making of candy?
7. How much did you spend for candy last month?
8. Should you eat candy before breakfast? Why?
9. Give two reasons for and against the eating of much candy.
10. What do you mean by the "soft-ball stage"? "The crack stage"?

MEAT

Meat is chiefly that muscle-tissue of animals which is used for food, such as beef, veal, pork, mutton, lamb, and venison. Beef is obtained from the cow, steer, and heifer; veal is obtained from the calf; pork from the pig; mutton from the sheep; lamb from the lamb; and venison from the deer.

As we buy the meat at the store we find it is made up of the following parts: muscle, bone, fat, and juice.

HOW TO JUDGE GOOD MEAT

Beef

Good beef should be firm, fine-grained, bright red in colour, and with fat well distributed. The fat should be *firm and of a yellowish colour.* The suet should be dry and crumble easily.

Mutton or Lamb

Good mutton should be fine-grained and of a bright-pink colour; the fat should be hard, white, and flaky. The outside skin or fell should come off easily; this removes the strong taste.

Veal

Good veal should have pinkish-coloured flesh and white fat. When flesh lacks colour it has been taken from a calf which was too young to be used for food.

Pork

Good pork should have pinkish-coloured flesh and white fat. Pork that has dark spots on it is not fit for use.

STRUCTURE OF MEAT

In studying the structure of meat we are mostly concerned with that part known as the muscle. The muscle is made up of many *fibres* as fine as a hair. These fibres are hollow tubes held together by a tough substance called *connective tissue.* You will notice that some beef can easily be torn into shreds after it has been stewed. In the process of cooking, the connective tissue has been softened into a jelly-like substance so that the fibres can be separated.

In these hollow tubes there is a red liquid which is called the juice of the meat. The juice is largely water in which is dissolved *extractives* which give the flavour to the meat, and also some protein called albumen, resembling that protein in milk which appears in the form of a scum on the surface of the milk when heated.

COMPOSITION OF MEAT

Meat is of value to the body largely because of its protein, fat, and minerals. The proteins of meat are of excellent quality. The protein found in the fibres is called myosin; that found in the juice is called albumen.

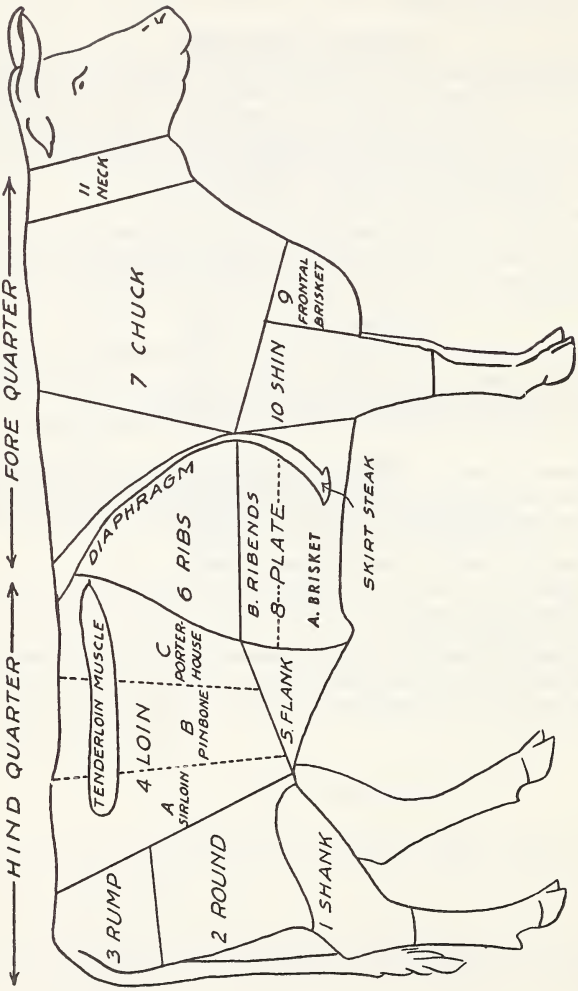
The fat is found not only around the muscle, but sprinkled through the lean part.

The mineral matter is largely iron and phosphorous. Meat has very little calcium. Because of its iron content, meat is valuable in producing good red blood.

Meat contains about 60 per cent water. It is due to the evaporation of some of this water that meat shrinks in the process of cooking.

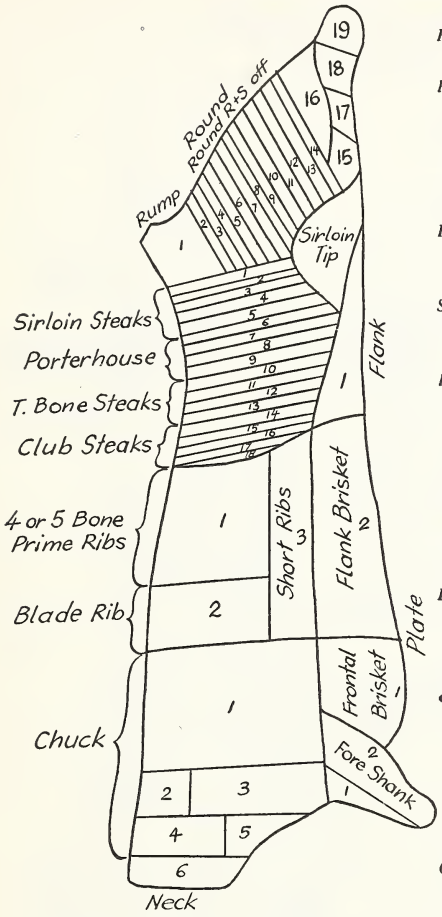
Meat contains flavouring materials called extractives. These extractives are of no food value, but give the meat its delightful flavour and in that way add much to the enjoyment of a meal in which meat is served. They stimulate the appetite and the flow of digestive juices.

Meat is lacking in carbohydrates, and because of that lack it is usually served with potatoes. As a source of vitamins meat is relatively unimportant. Glandular organs are good sources of riboflavin.



WHOLESALE CUTS OF BEEF

RETAIL CUTS OF BEEF



• The general practice is to "rib" beef, that is, divide the front quarter from the hind quarter between the 11th and 12th ribs. This means that 12th and 13th ribs are on the hind quarter. The "rib" consists of seven bones. This in turn is divided into four or five bones of standing rib roasts and two or three bones blade rib roasts, which contain part of the shoulder blade. When the blade ribs are boned and rolled, the inside roll (the part beneath the shoulder blade) would be an oven roast, and the outside roll a pot roast.

Hind Quarter

Round: Rump—

1. Rump.

Round: Rump and Shank off—

2. Round steak, first cut.
3-13. Round steaks.
14. Round steak, last cut.
15. Knuckle soup bone.
16. Pot roast.

Hind Shank—

17-18. Soup bone.
19. Hock soup bones.

Sirloin Tip—

Roast—lean, boneless meat, often cut in half.

Loin—

1-5. Sirloin steaks—New York steaks.
6-9. Porterhouse steaks (large undercut tenderloin muscle).
10-13. T-bone steaks (smaller undercut).
14-18. Club steaks (little or no undercut).

Flank—

Flank steak.
Stew.

Fore Quarter

• *Rib—*

1. Prime ribs (8th, 9th, 10th, and 11th ribs)—cut between 11th and 12th ribs — for roasts or steaks.
2. Blade rib (5th, 6th and 7th ribs)—blade pot roast.

Chuck—

1. Chuck (1st, 2nd, 3rd and 4th ribs)—pot roasts.
2-5. Pot roasts, stews.
6. Neck — stew.

Plate—

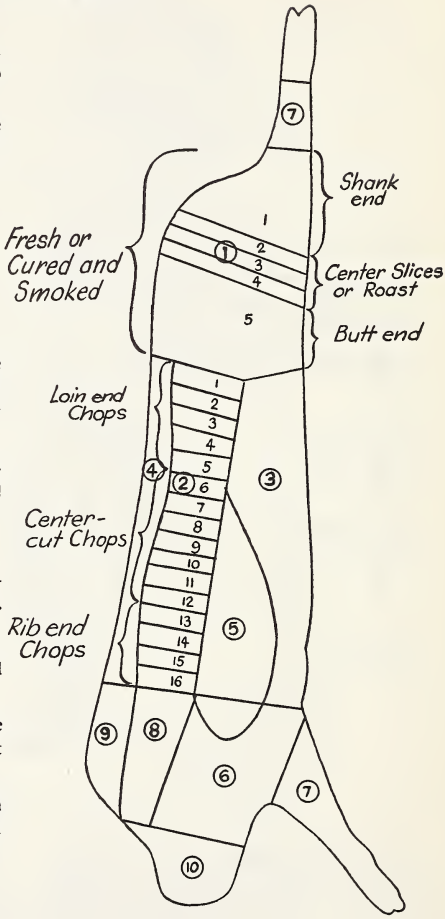
1. Frontal brisket.
2. Flank brisket.
3. Short ribs.

Fore Shank—

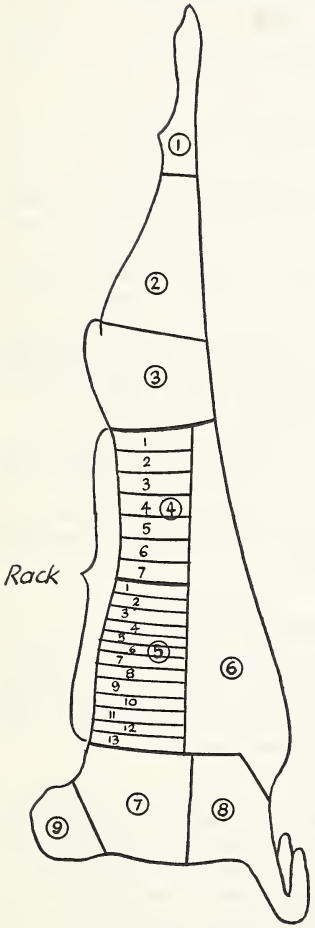
1. Stew.
2. Soup bones.

CUTS OF PORK

1. *Ham.*—Fresh or cured and smoked. It is economical to buy a whole ham.
   1. The shank end can be boiled, and the rind used for seasoning.
   2-4. Ham slices or roast.
   5. Butt end. Baked ham.
2. *Loin.*—Roasts or chops.
   1-5. Loin end chops.
   6-12. Centre cut chops.
   13-16. Rib end chops.
3. *Belly.*—Used for bacon. The best grade of bacon "certified" brands, is the heart of this cut.
4. *Fat back.*—Of very little commercial value. Fat rendered down into lard.
5. *Spare ribs.*—(50% meat).
6. *Picnic Butt (shoulder).*—Roasts, steaks, chops, hams.
7. *Hock.*—Pickled and stewed.
8. *Boston Butt.*—Steaks and roasts.
9. *Clear Plate.*—Very little little commercial value. Fat rendered down into lard.
10. *Jowl.*—Used for cheap bacon and generally cooked with baked beans.



MUTTON AND LAMB CUTS



MUTTON AND LAMB CUTS

1. *Shank cut.*—Stew.
2. *Leg end.*—Roasts or leg steaks.
3. *Butt end.*
4. *Loin.*—Roast and chops. (Some with undercut or tenderloin muscles).
5. *Ribs (or Hotel Rack).*—Roasts and chops.
6. ***Breast.*—Stews.**
7. **Shoulder.*—Roasts and stews.
8. *Shank.*—Broths, soups, stews.
9. *Neck.*—Broth, soups, stews.

* Shoulder often sold as "lamb in a basket" —several chops, one roast and stew meat.

TOUGH AND TENDER MEAT

Meat is tough or tender, depending on the connective tissue. When an animal is young the connective tissue is very tender, but when the animal grows old the connective tissue in the muscles increases in quantity and toughness. Also, when any muscle is used a great deal, such as the neck of the animal, the connective tissue toughens, making what we call a tough cut of meat. Those muscles that get little exercise are tender. (See chart.) *Age* and *exercise*, then, are the two main factors in making meat tough. The wrong method of cooking may be a third factor. Many a good steak is ruined between the butcher's and the table.

Tender cuts of meat are much more expensive than the tough cuts. The flavour of these cuts is good and they are quickly cooked. *However, they are no more nutritious than the tougher cuts, which are much cheaper.* There are more extractives in the tougher cuts, so that when they are properly cooked they are richer in flavour.

The tender cuts of meat are those taken from the back of the animal—these are the muscles of support; e.g., the loin, rump and ribs used as roasts, steaks and chops. A round steak is taken from the leg, and while the upper round is less tough than other parts of the animal that get a lot of exercise, it is still advisable to treat a round steak as a tough cut from the standpoint of cooking. The shoulder and leg of lamb and veal are considered tender cuts owing to lack of age and inactivity of the animal from which they are taken.

Tougher cuts of meat are those taken from the parts of the animal getting the most exercise—these are the muscles of locomotion: e.g., shanks, neck, flank, brisket, chuck, round, etc. These are cooked as stews, pot roasts, or boiled meat.

The meat from well-fed animals is more tender and juicy than that from animals deprived of good care and feeding. If meat is eaten soon after being slaughtered, it is tougher than meat that is hung and aged.

PRINCIPLES OF COOKING MEAT

Tender cuts of meat can be cooked by *dry heat*, as in broiling, pan-broiling, or roasting, but tough cuts can be made tender only by the application of *moist heat*, such as in pot-roasting and stewing. When the meat is cooked for some time in water or steam, the tough connective tissue softens and changes, forming a tender substance called gelatine. Tough connective tissue may also be broken up by chopping, as in Hamburg steak.

Recent experiments make it necessary for us to change many of our ideas in regard to the best methods of cooking meat. Our main object is to prevent shrinkage in so far as possible, and yet to produce a tender, juicy, tasty product.

It has now been proved that in roasting, searing does little to help to keep in the juices, and much less shrinkage results when a lower temperature for a longer time is used throughout the cooking period (300° F.). Searing, however, accomplishes two things: (1) It makes the meat look more attractive; (2) it makes the outside layers taste better.

An uncovered pan with a rack in the bottom gives the best results in roasting. Flour may be sprinkled over the meat. The time allowed varies with individual preference.

For rare meat, allow 16 min. to the lb.
For medium meat, allow 22 min. to the lb.
For well-done meat, allow 30 min. to the lb.

Add salt during or after cooking, not before. The salt flavour does not penetrate more than 1 inch.

If the meat does not reach the desired colour during roasting, increase the heat to 500° F., for a few minutes before removing from the pan.

METHODS OF SEARING

By *searing* meat, we mean subjecting it to a high temperature until the surface is nicely browned. This may be accomplished in three ways:

1. By browning in an uncovered pan in a hot oven (450° to 500° F.)
2. By browning in hot fat in a frying-pan on the surface burner.
3. By adding boiling water and cooking at boiling temperature until the outside of the meat has lost its red colour.

TO MAKE SOUP

When buying a roast from which the bone has been trimmed, the customer always pays for the bone. Consequently, she should see that she gets it, as it is useful in making meat broth or soup stock.

When the bone is cooked in water for a long time, a substance inside it changes into gelatine. This gelatine dissolves in hot water and so is present in the soup stock.

Soup stock is greatly improved when some meat, in addition to the bone, is used in preparing it. The toughest cuts—such as the shank—which are richest in extractives are best. Since only a very small amount of nourishment is dissolved out in the water, plans should be made to use the soup meat in various left-over dishes. It is somewhat flat in flavour, so that onions or Oxo cubes should be added to increase the palatability.

We have learned that browning meat improves the flavour. In making soup, brown one-third of the meat in the marrow or fat. Then add enough cold water to cover the bone. Gradually heat to simmering temperature, and cook slowly for about 3 hours. Vegetables, diced or grated, may be added during the last hour. Celery leaves, fresh or dried, add to the flavour.

REASONS FOR COOKING MEAT

1. To develop flavour.
2. To soften the connective tissue when present in large quantity.
3. To kill any living organisms that may be present.

METHODS OF COOKING

I. By Application of Dry Heat. (Used only for tender cuts).

Broiling—The meat is placed on a broiler rack and exposed to direct heat.

Pan-broiling—The meat is cooked in a hot frying pan without any fat. The hot metal browns the surface.

Roasting—The meat is cooked in a roasting or baking pan in the oven. Sufficient

moisture and fat is contained in the meat to furnish the moisture for cooking and basting. Roasting should be done in an open pan at 300° F.

II. By Application of Moist Heat. (Used always for tough cuts).

Boiling—This is immersing the meat in boiling water and cooking at a temperature below the boiling point (180°—210° F.).

Stewing—This is long, slow cooking in a limited quantity of water below the boiling point. The meat is cut in small pieces and browned first to give it a good rich flavour. The pot is tightly covered and the enclosed steam assists in the cooking. The nutrients drawn out in the liquid by stewing are saved when the liquid is served with meat as gravy.

Pot-roasting—The meat is cooked in a kettle on the top of the stove by first searing the surface of the meat on all sides by contact with the hot metal, or hot fat, then adding a small quantity of water to create steam to carry on the cooking process.

III. By Cooking in Fat, as in:—

Frying—This is cooking in deep fat. To prevent absorption of fat by meat when fried, the fat must be hot enough to sear the surface of the meat as soon as put in. The fat is never hot enough until it ceases to bubble. *For cooked mixtures* an inch cube of bread should turn a golden-brown in 40 sec.; *for uncooked mixtures* it should turn a golden-brown in 60 sec.

Sautéing—This is cooking in a small amount of fat. Put 1 tbsp. of fat in a frying-pan. When hot, add the food to be cooked; stir or turn occasionally until brown and well cooked.

NOTE.—Too much fat and too low a temperature in cooking makes food greasy.

GENERAL RULES

1. Remove meat from paper as soon as it comes from the market; weigh, and wipe with a damp cloth. Meat should not be washed as it causes a greater loss of juice.

2. Place in a granite or earthenware dish; cover and keep in a cool place until time of using.

3. Broil, pan-broil, or roast only tender cuts of meat. The juice of the meat contains extractives which give to meat its characteristic flavour. Extractives are useful only in stimulating the appetite and in stimulating the digestive juices.

4. Cook all tough meats in moist heat to make tender the tough connective tissue. Sear meat with hot fat so as to improve the flavour and appearance. When seared, the temperature should be reduced and meat cooked until tender, just below the boiling-point.

5. Tough connective tissue may be softened: (a) By moist heat; (b) by pounding; (c) by chopping, as Hamburg steak.

6. For *roasts* weighing less than 8 lb. allow 22 min. to the lb. for medium, 30 min. to the lb. for well-done (300° F.).

7. For *tough cuts* weighing less than 8 lb. allow 30 min. to the lb. and 30 min. extra.

8. Increase the time of cooking for pork (35 min. to the lb.) as it should be thoroughly cooked to destroy the trichinæ.

9. In making meat stock, add cold water to the meat; bring to simmering-point and simmer for several hours. This extracts the juices, making a richly flavoured stock. If some of the meat is browned the flavour is improved.

10. Meat left after making soup can be prepared as any left-over meat, using seasonings or beef extract to add flavour.

COOKING FROZEN MEAT

At one time, the complete thawing of frozen meat was recommended. Now the trend is changing and it has been found that completely frozen meat can be cooked with excellent results. The one disadvantage is that it takes a longer time to cook and so uses more fuel.

Time per pound in cooking is not reliable and, as in fresh meats, a meat thermometer is recommended for good results. In general, completely frozen roasts take 1½ to twice as long to cook as thawed roasts. The price of a thermometer will be saved many times by the satisfaction obtained. Do not attempt to insert the thermometer in the roast while it is still frozen. Let it cook a while, then insert a metal skewer into the roast, before inserting the thermometer. Cook a roast at 300° F. or less, or the surface tends to become dry before the roast is cooked.

LAMB CHOPS (BROILED)

1. Prepare meat as in general rules.
2. Follow general rules for pan-broiling.
3. Cook or broil 6 minutes.
4. Let chops stand on edge in the frying pan to brown the outside fat.
5. Drain on plain paper and spread with butter.

NOTE.—Chops may be boned, rolled, and cooked as above.

OVEN ROAST

1. Prepare meat as in general rules.
2. Place on a rack in a shallow, uncovered roasting pan.
3. Follow general rules for roasting. Serve with brown gravy.

GRAVY

1. Remove the roast from the pan; keep it hot in a warming oven.
2. For each cup of gravy leave 2 tablespoons fat in the pan; pour off the rest.
3. Stir in 2 tablespoons flour for each cup of gravy; stir until brown.
4. Remove the pan from the stove; stir in a little cold water to make a smooth paste; thin with measured hot water or vegetable stock.
5. Return the pan to the heat; stir until the sauce thickens.
6. Season well; if necessary add a little gravy colouring. 1 cup of gravy serves 3.

BROILED STEAK (OVEN)

Steak, 1—2 inches. thick.

Butter, salt, pepper, parsley and lemon for garnishing.

1. Wipe steak and trim off fat. (The fat is likely to catch fire).
2. Cut edges to prevent curling.

3. Heat broiler for 5 minutes.
4. Remove rack and grease.
5. Put steak on hot rack and place rack about 3 inches from the direct heat. The tray below the rack *may* be covered with water, if preferred. Keep the broiler door open.
6. Cook until the surface is sufficiently browned.
7. Turn and brown the other side. A steak 1 inch thick will require 5—8 minutes; a steak 2 inches thick will require 7—12 minutes.
8. Remove to hot platter, spread with butter, and sprinkle with salt and pepper.
9. Garnish with parsley or slices of lemon.

PAN-BROILED STEAK

Steak, ¾—1 inch thick. Salt, pepper, butter.

1. Prepare meat as in general rules.
2. Heat pan till smoking hot. Place steak in pan and finish as for Broiled Steak.

MINT SAUCE

½ c. mint leaves chopped fine. 2 tbsp. powdered sugar.
1 c. hot vinegar.

1. Dissolve the sugar in the vinegar and pour over the chopped mint leaves.
2. Let stand 30 minutes to infuse.
3. If the vinegar is very strong, dilute with water.

POT ROAST

1. Prepare meat as in general rules.
2. Follow rules for pot-roasting, and 1 hour before cooked add any vegetables desired.
3. Cover tightly; cook below boiling point until the meat is tender.
4. Add hot water as needed; season when partly cooked.
5. Place on platter; arrange vegetables around the roast.
6. Serve with brown gravy.

MEAT STEW

1½ lb. tough meat.
1 small onion.
1/3 c. turnips cut in inch cubes
2/3 c. carrots cut in inch slices.
1½ tsp. salt.
⅛ tsp. pepper.
½ c. flour.
3—4 potatoes cut in ¾-inch slices.

1. Wipe the meat, remove fat, and cut meat in 1-inch pieces.
2. Cover coarser pieces and bone with cold water; heat to boiling.
3. Season remainder of meat; roll in flour.
4. Brown the meat and onion in the fat in the frying pan.
5. Add meat and onions to the stew; cook below boiling-point 2 hours.
6. After the meat has cooked 1¼ hr. add turnips and carrots; add potatoes 15 min. later.
7. Thicken stock with flour and seasonings mixed to a paste with cold water.
8. Cook until thick; serve with dumplings.

DUMPLINGS

2 c. flour.
4 tsp. baking-powder.
2 tsp. butter.
¾ c. milk or water.
½ tsp. salt.

1. Mix as for baking-powder biscuits.
2. Drop from a tablespoon on top of stew.
3. Cover closely and cook for 10 minutes without lifting cover.
4. Arrange around the meat on platter and serve at once.

LAMB STEW (Pressure Cooker)

2 tbsp. fat.
1½ lbs. lamb cut in 2-in. cubes.
Salt and pepper.
4 small onions.
4 whole carrots.
4 small potatoes.
¼ cup water.

Method—Heat Cooker and add fat. Season lamb with salt and pepper. Sear meat a golden brown. Place onions, carrots, and potatoes around meat. Add water. Place cover on Cooker. Allow steam to flow from vent pipe to release all air from Cooker. Place indicator weight on vent pipe and cook 10 minutes with stem at COOK position. Let stem return to DOWN position.

SWISS STEAK I

2 lb. round steak 1—1½ inches thick.
1/3 c. flour.
1 tsp. salt.
⅛ tsp. pepper.
2 tbsp. dripping.
1 slice onion.
2 c. boiling water, or
1 c. water and 1 c. strained tomatoes.

1. Wipe meat; place on board.
2. Dredge with mixed flour and seasonings.
3. Pound flour into meat, using wooden potato-masher or edge of heavy plate.
4. Heat frying-pan very hot; put in fat.
5. Brown meat on each side.
6. Add onion, boiling water, and tomato.
7. Cover tightly; cook below boiling-point 2 hr.

NOTE.—Meat may be cooked in this way in a casserole in oven. Vegetables, as green peppers and carrots, may be added.

SWISS STEAK II (Pressure Cooker)

2 lbs. round steak, 1-in. thick.
2 tbsp. flour.
1 small onion, cut fine.
2 tbsp. horse-radish.
Salt and pepper.
2 tbsp. fat.
¼ cup water.

Method—Cut steak into serving pieces. Mix flour with salt and pepper. Pound steak on both sides. Roll steak in seasoned flour. Heat Cooker; add fat. Brown meat in hot fat on both sides. Sprinkle onion and horse-radish over meat and add water. Place cover on Cooker. Allow steam to flow from vent pipe to release all air from Cooker. Place indicator weight on vent pipe and cook 15 minutes with stem at COOK position. Let stem return to DOWN position.

HAMBURG STEAK

1½ lb. raw lean beef minced.
1 tsp. salt.
⅛ tsp. pepper.
1 tsp. parsley, finely chopped.

1. Add seasonings to the meat; mix thoroughly.
2. Shape into firm, flat cakes ¾ inch thick.
3. Pan-broil.

MEAT LOAF I

1 egg.
½ c. water or tomatoes.
1½ lb. chopped beef.
1 c. soft bread crumbs.
2 tsp. salt.
⅛ tsp. pepper.
½ tsp. grated onion.
1 tsp. chopped parsley.
4 strips bacon.

1. In a mixing-bowl beat the egg and add water or tomatoes.
2. Add the other ingredients and mix well.
3. Pack into a greased pan. Cover with strips of bacon.
4. Bake in a moderate oven for 45—60 min.
5. Serve with gravy or tomato sauce.

MEAT LOAF II

1 egg, well beaten.
1½ lb. chopped (minced) steak.
1 c. rolled oats.
2/3 c. water.
¼ c. tomato ketchup.
Salt, pepper, onion.

Make into loaf and put in loaf pan.

Spread on top: 3 tbsp. brown sugar and tomato ketchup. Bake about 1 hour.

Baking time may be lessened by using a 8″ x 8″ pan, instead of a loaf pan. Spread the meat mixture to a 2″ thickness. Bake approximately 30 min. Serve in squares rather than slices.

LEFT-OVERS

SHEPHERD'S PIE

2 c. minced cooked meat.
Salt and pepper.
1 tsp. grated onion.
½ c. left-over gravy or meat stock.
3 c. mashed potatoes.
1 egg (if desired).

1. Mix meat, seasonings, and gravy; heat.
2. Worcestershire sauce, tomato catsup, or parsley may be added.
3. Warm left-over potatoes; beat well; add seasonings and egg, if desired; add milk if necessary to make proper consistency.
4. Butter a baking-dish; add the meat mixture and put a layer of potatoes on top.
5. Bake in a hot oven until potatoes are browned.

Variation

Substitute a rich biscuit crust for the potato crust.

CHARTREUSE OF RICE AND MEAT

1 c. rice.
2 qt. boiling water.
1 c. stock.
1 pt. cold meat or fish.
1 c. tomato sauce.
1 egg.

1. Cook the rice in the boiling water until tender.
2. Drain and line mould ½ inch deep.
3. Beat the egg slightly and mix with the finely cut meat; then add the stock.
4. Fill the centre of the mould with meat mixture; cover the top with rice and steam 30 min.
5. Turn from the mould and serve with tomato sauce.
6. Mashed potato may be used in place of rice.

QUESTIONS

1. Name the different kinds of meat and the animal from which each is taken.
2. What are the parts of meat as we bring it from the store?
3. What is connective tissue? Where is it found? Of what value is it?
4. Name two things that will toughen connective tissue.
5. How can we soften connective tissue by cooking?
6. What parts of the animal are likely to have tough connective tissue?
7. What is meant by cooking meat by dry heat?
8. Name three methods of cooking by moist heat. Name three methods of cooking by dry heat.
9. What are extractives? Of what value are they?
10. In what cuts of meat do we find the greatest abundance of extractives?
11. Why is soup-meat flat to the taste? What should be done with it?
12. How do we sear meat? Of what value is searing?
13. What do we mean when we say protein 'coagulates"?
14. What does the juice of the meat contain?
15. What do the fibres of the meat resemble?
16. Why is the wrapping paper on the meat frequently red?
17. Should we wash meat? Why?
18. From what part of the animal do we get the following cuts: Round steak; T-bone steak; sirloin steak; chuck; shank; brisket; rump roast; rib roast? What is the price of each per pound?
19. Why do we not sear the meat when we wish to make soup?
20. Should round steak be cooked by moist heat? Why?
21. At what temperature does meat shrink least in cooking?
22. Why is meat valuable in the diet?
23. Why is meat usually served with potatoes?
24. How often should meat be served in the day?
25. Is meat as valuable as milk for building bones? Why?
26. What causes spoilage of meat?
27. Which is more expensive, a sirloin steak or a round steak? Why?
28. Name three meat substitutes.
29. Explain how to cook a T-bone steak; a brisket; Hamburg steak.

FISH

General Composition

Fish muscle is composed of protein, fat, mineral matter, and water. The connective tissue of fish is less in quantity and more tender than that found in meat.

Food Value

All fish are good sources of high quality "complete" protein. Some fish are high in fat (see classification below), and others are very low in fat. The non-oily fish are low in calories; the oily fish supply two to three times as many calories. Some minerals and vitamins, in useful amounts are supplied by fish, but this varies with the species of fish.

Classification of Fish

There are three ways to classify fish.

1. According to where they live—
   (a) Salt-water, e.g.—salmon, cod, halibut, herring, tuna.
   (b) Fresh-water, e.g.—rainbow trout, char, whitefish, kokanee.
2. According to their covering—
   (a) Fish with scales, e.g.—salmon, trout.
   (b) Shellfish, e.g.—crab, shrimp, oyster, clam.
3. According to their fat content—
   (a) Oily fish, e.g.—salmon, tuna. herring, black cod, sardines.
   (b) Non-oily fish (Dry)—cod, sole, halibut, shellfish.

Buying of Fish

Fish is available on the market in many forms—fresh, frozen, canned, smoked, salted, dried and pickled. Fresh fish may be purchased in four ways:

1. "Round"—just as it comes from the water. Yield is approximately one serving per pound.

2. "Whole dressed" or a piece—with scales, entrails, fins, and tail removed. Yield is two servings per pound.

3. "Fillets"—flesh is removed from bone and skin. Yield is three servings per pound.

4. "Steaks"—steaks are cut crosswise from whole dressed fish. Thickness of 1"—1½" is best. Too thin a steak will dry in cooking. Yield is two to three servings per pound.

Selection of Good Quality

Freshness of fish is essential. The signs of freshness are—

1. The skin should have a moist shininess, and the scales should cling tightly.
2. Fish is firm and elastic to the touch. Cut edges appear firm and moist.
3. Fresh odour—not a strong odour.
4. Gills are clear bright red, and eyes bright and full.
5. Shellfish, if not purchased cooked, must be alive. Crabs will be active and vigorous, clams will have tightly closed shells.

Storing Fish in the Home

Fish in a highly perishable food. Care must be taken to maintain quality during storage.

1. Fresh whole fish—wash in cold water and dry. Wrap in wax paper to protect moisture and prevent transfer of odours. Store in refrigerator. Keep as short a time as possible.

2. Fresh fillets or steaks—wipe with damp cheesecloth. Do not immerse in water. Wrap in wax paper, or place in container with a piece of wax paper over, not a tight cover.

3. Frozen fish—keep solidly frozen by storing in freezer, or frozen food section of refrigerator. Never re-freeze fish which has been thawed.

Preparing for Cooking

1. To remove scales—With one hand hold the tail firmly. With the other hand loosen scales with a dull knife or scaler held at 45° angle and pushed against the skin, from the tail towards the head. Holding the fish under water during scaling prevents the scales flying.

2. To remove the entrails—Place the point of a sharp knife under the skin at the vent (opening). Then split the skin to the gills. Remove the viscera, wash away any blood and scrape the backbone area clean. If a black membrane is present remove by rubbing with salt or a brush.

3. To remove the head, tails and fins—If preferred the head may be left on, but the gills, eyes, and inedible part of the tail should be removed. To remove the head cut across the base of the gills. If the backbone is large, cut through the flesh on each side of the bone, then snap the backbone by bending it over the edge of a table. Cut through the remaining flesh. To remove the tail, cut through the flesh and snap the backbone as above. Remove the fins by cutting the skin along both sides of fins. Then grasp the fins and pull quickly toward the head. Never trim the fins with shears or a knife as the bones inside will still remain.

4. To bone the fish—Before removing the tail continue the slit from the vent to the tail. To loosen the flesh from the backbone, cut across from the slit to the back. Holding the tail with one hand insert the sharp edge of the knife flatly between the flesh and backbone. Press the knife toward the head, cutting the flesh from the ribs and backbone. Turn the fish over, and by the same method cut the flesh from the bones of the other side. Then grasp the tail in one hand and pull forward to remove the backbone. Use the other hand to hold the fish in place, and ease the flesh from the bones.

5. Utensils—If dishes have a strong odour rinse with strong, warm, salt solution or boil in vinegar solution before washing in hot soapy water.

6. Hands—To prevent odour clinging to hands, rinse in cold water before touching raw fish. After handling fish, it is well to rub hands with moistened salt, and rinse in clear water, before washing with soap.

HOW TO TELL WHEN YOUR FISH IS COOKED

You will know that your fish is cooked—
When the flesh loses its translucent appearance and takes on a whitish tint.
When the juices are milky.
When the flesh is easily pierced by a fork and will separate into flakes.
Overcooking will cause it to toughen, shrink and dry out.
Cook your fish only until the above signs show that it is done.

BASIC METHODS OF FISH COOKERY

Unlike other protein foods, fish is better cooked at a high temperature for a very short time. Overcooking toughens fish. The time required for cooking depends upon the thickness of fish. Fish is done when it takes on an opaque appearance and the flakes are easily separated, and are still full of juice. Basic methods for cooking are as follows:—

Baked Fish

1. Obtain either a whole fish, or a piece.
2. Prepare as directed above; wash, scale and remove bone.
3. Stuff the fish with suitable dressing, allowing about 1 cup dressing for each pound of fish.
4. Fasten edges together with small skewer or toothpicks, and lace string around them.
5. Place fish on a baking pan which has been covered with aluminum foil or is well greased.
6. Measure the thickness of the stuffed fish.
7. Bake in a very hot oven 450°—500° F. and allow approximately ten minutes cooking time for each inch thickness of stuffed fish.
8. Prior to serving, remove the skewers or toothpicks, and string. Remove the skin, if desired.

Bread Dressing for Fish

3 tbsp. chopped onion.
¾ cup chopped celery.
6 tbsp. butter.
1 tsp. salt.
f. g. pepper.
1 tsp. thyme.
4 cups day-old bread crumbs.

Cook union and celery in butter until tender—about 10 minutes. Combine all ingredients; mix thoroughly.

Baked Fillets—Spencer Method

2 lb. fish fillets, fresh or frozen.
½ cup milk.
1 tsp. salt.
¾ cup fine, dry bread crumbs.

N.B.—If using frozen fillets, do not thaw before baking.

1. Cut fillets into individual portions.
2. Dip in milk to which salt has been added, then in bread crumbs.
3. Place fish on a greased baking dish, and dot with butter.
4. Measure the thickness of the pieces.
5. Bake in a very hot oven 450°—500° F., allowing approximately ten minutes per inch thickness for fresh fish, and approximately twenty minutes per inch for frozen fish. Yield 6 servings.

Broiled Fish

1. Frozen fillets or steaks need not be thawed.
2. Preheat the broiler.
3. Sprinkle the fish with salt and pepper. Arrange it on a greased broiler pan and baste with melted fat.
4. Broil the fish 2 to 4 inches from the top heat, depending on the oven. If the fish is frozen, place it farther from the top heat—anywhere from 6 to 8 inches.

5. As in baking, the thickness of the fish determines the length of time to broil it. Allow about 10 minutes broiling time for each inch of thickness if the fish is fresh, and approximately 20 minutes for each inch thickness if the fish is frozen. Turn the fish at half time. Season and baste the other side, and cook till done.

Pan Fried Fish

2 lb. fish.
½ cup flour.
½ tsp. salt.
⅛ tsp. pepper.
¼–½ cup fat.

1. Frozen fillets or steaks should be partially thawed before pan frying. Separate fillets in a package to single fillets for frying.
2. Cut into individual servings.
3. Dip the fish in seasoned flour.
4. Fry in hot fat until brown on one side; turn and brown the other side. Yield: six servings.

Deep Fried Fish in Batter

1½ cups all-purpose flour.
1 tbsp. baking-powder.
1 tsp. salt.
2 eggs.
1 cup milk

1. Mix and sift dry ingredients. Beat eggs and add milk. Add liquid to dry ingredients, and stir until smooth.
2. Use fish fillets no more than one-half inch thick and cut in serving-size pieces.
3. If the pieces of fish are thick, but not thick enough to slice conveniently, make three or four slits in the side. This helps the fish to cook more evenly and quickly.
4. Frozen fish should be thawed for deep frying, but only just prior to cooking. Dry the thawed fillets before dipping in batter.
5. Dip pieces of fish in the batter and the coating of batter should be thin.
6. Fry in deep fat at 375° F. until golden brown.
7. Drain on absorbent paper and serve at once.

Fish Cooked in Parchment Paper (Boiled)

N. B.—If using frozen fish, do not thaw before cooking.

1. Moisten the parchment paper and lay flat on table.
2. Cut fillets into serving size pieces and measure the thickness.

If using a piece of whole fish measure the thickness of the piece.

3. Place the fish in the center of the paper. Lift the sides and corners and tie into a bag leaving one long end of string.
4. Place in a saucepan of boiling water and tie edges of paper to handle of pan. Place the lid a little to one side so that no condensation will reach the fish.
5. Allow approximately ten minutes cooking time per inch thickness of fresh fish, and approximately twenty minutes per inch thickness of frozen fish.

SMOKED FILLETS COOKED IN MILK

2 lb. smoked fillets.
1 tbsp. butter.
1–2 cups milk.
Pepper.

1. Wipe fish with a damp cloth, and cut into portions.
2. Simmer fillets in milk until fish flakes easily with a fork.
3. Season with pepper, dot with butter and serve immediately.
4. If desired milk may be thickened and served as a cream sauce.

WHITE SAUCE FOR FISH

1 cup milk.
2 tbsp. butter.
Salt and pepper to taste.
1 tbsp. flour.

Make as for White Sauce.

TARTAR SAUCE

½ cup mayonnaise dressing.
1 tsp. chopped pickle.
1 tsp. parsley (washed and chopped).
1 tsp. chopped olives.

Mix the parsley, pickle, and olives, and add them to the mayonnaise dressing.

TOMATO SAUCE

To serve with cod, halibut or sole.

2 cups canned tomatoes.
2 tbsp. chopped onion.
6 peppercorns.
1 bay leaf.
1 tsp. sugar.
1 tsp. salt.
2 tbsp. butter.
2 tbsp. flour.
⅛ tsp. pepper.

Cook tomatoes with onion, peppercorns, bay leaf, sugar and salt three minutes. Melt butter, add flour and cook until frothy. Slowly add tomato mixture. Cook, stirring constantly for two minutes. Strain and add pepper. Yield: 2 cups of sauce.

NOTE.—Sauce may be used without straining but peppercorns should be removed before serving.

MOCK HOLLANDAISE SAUCE

2 tbsp. butter.
2 tbsp. flour.
¼ tsp. salt.
1 cup milk.

Make a white sauce with the above ingredients. When the sauce has thickened add 2 tablespoons butter, 1 tablespoon at a time. Add 1 beaten egg yolk. For a smooth sauce, add 2 tablespoons sauce to the egg yolk, then add the mixture to the remaining sauce. Remove from heat and add 2 tablespoons lemon juice.

CHINESE SAUCE

To serve with cod, halibut, or sole.

¼ cup soya sauce.
½ cup vinegar
½ cup sugar
½ cup water.
2 tbsp. flour.
1 tsp. powdered ginger.

Mix all ingredients in the top of a double boiler and cook until thickened. Pour over top of cooked fish and then sprinkle with chopped little green onions.

CRAB COCKTAIL

Sauce

2 tbsp. mayonnaise.
⅛—¼ tsp. finely chopped onion.
1—2 drops Tabasco
½ tsp. chopped parsley.
Salt and pepper to taste.

Arrange crabmeat on a lettuce leaf in fish cocktail glass. Top with 2 tbsp. sauce and garnish with paprika and a lemon wedge.

PAN FRIED OYSTERS

2 cups raw oysters.
½ cup flour.
1 teaspoon salt.
1 egg.
½ cup dry bread crumbs.

Roll oysters in salted flour, dip in slightly beaten egg and roll in bread crumbs. Pan fry until golden brown—about 5 minutes. Yield: 6 servings.

CLAM CHOWDER I

1 tsp. butter.
2 cups boiling water.
3 tbsp. chopped onion.
1 cup clams with juice, or
1 can clams (net solids 5 oz.)
⅛ tsp. thyme.
1 tsp. flour.
½ cup diced celery.
½ cup diced potatoes.
½ cup canned tomatoes.
½ tsp. chopped parsley.

Melt butter in top part of large double boiler. Blend in flour. Add boiling water gradually, stir constantly. Add diced celery, chopped onion and diced potatoes. Cook over direct heat for 20 minutes. Place over boiling water and add clams with juice, canned tomatoes and thyme. Reheat. Garnish with parsley just before serving. Serve hot.

CREAM STYLE CLAM CHOWDER II

1—8-oz. tin clams.
½ cup finely chopped onion.
Salt.
2½ tbsp. butter or margarine.
2 tbsp. flour.
1½ cups milk.

Melt butter or margarine in top of double boiler, directly over the heat. Add finely chopped onion and cook 5 minutes, or until onion is lightly done. Remove from heat, add flour and mix well. Add clam liquid slowly, mixing until smooth, add clams, and milk. Salt to taste and cook until thick. Yield: 3-4 servings.

QUESTIONS ON FISH

1. Why should the time for cooking fish be estimated according to thickness, rather than to weight?
2. How may we prevent fish from breaking when boiling or steaming? Why does it break so easily?
3. Name three suitable fish garnishes.
4. Name three ways of cooking fish.
5. Why should we endeavour to eat more fish in British Columbia?
6. What are the signs of freshness in fish?
7. On the market, what is meant by—
   (a) Fish fillets?
   (b) Whole dressed fish?
   (c) Round fish?
   (d) Fish steaks?
8. How should fish be stored at home? Why?
9. How can you tell when fish is cooked?
10. What is the distinct difference between cooking fish and meat?
11. Is fish a meat alternate? Why?

POULTRY

The term poultry includes all domestic fowl, as chicken, geese, turkey and ducks.

Poultry is more delicate in flavour than meat. It is more easily digested because of the short muscle-fibres and the small amount of fat in the muscle. The light meat of poultry is more tender but poorer in flavour than the leg, owing to the fact that the leg has more exercise and consequently more extractives.

The price and the method used in cooking are determined by the following factors:

1. Kind—Chicken, turkey, goose or duck.
2. Class—Broiler, roaster, etc.
3. Preparation for market—Live, dressed, ready to cook.
4. Quality—(Grade)—Poultry is graded as Special, A, B, and C.

Spring chickens are sold as broilers, or fryers. These are young, tender birds weighing approximately 2½ to 3 pounds. A serving is usually one-half a chicken.

Roasting chickens are older birds, usually from 5 to 9 months old, and weighing from 3 to 6 pounds. A five pound roasting chicken is an economical size to buy. A chicken of this size will serve 8 people—allowing approximately half a pound per person.

A capon is a larger chicken, usually weighing 6 to 7 lbs., and is a good choice for roasting.

Stewing chickens, such as fowl or hens, are mature birds of over one year. They are much less tender and a moist heat is required in cooking.

Characteristics to note in Selection:

Tenderness depends largely upon the age of the bird and the amount of fat. The age may be determined by the breastbone, which is soft and flexible at the tip in a young bird, and hard in an old one.

Good quality poultry should have clean, smooth skin, with very few pin feathers or long hairs, with no bruises or discolorations. The skin of a young bird will be smooth, soft and thin while the skin of a fowl may be thick and coarse. A wide plump body, with well fleshed breast and legs, and fat well distributed under skin indicates good quality.

Poultry is graded as:—Grade Special
Grade A
Grade B
Grade C

Cooking Poultry:

A bird cooked at low temperature shrinks less, has better textured meat and is more attractive to serve. A high temperature dries out the meat, by any method of cooking.

METHOD OF PREPARING POULTRY

1. Weigh; remove the pin-feathers without breaking the skin; singe over a flame to remove hairs.
2. Cut off the head and feet.
3. Turn back skin and cut neck close to the body, if desired.
4. Remove windpipe and crop.
5. Remove oil-bag from tail.

6. Take out internal organs—cut through skin over intestines and around vent; insert fingers and loosen skin around internal organs; draw from behind the gizzard, and take out gizzard, liver, and intestines, being careful not to break the gall-bladder on the liver. Remove lungs and kidneys.

7. Wash fowl inside and out with lukewarm, salted water; rinse in cold water; wipe inside and out, and just before stuffing sprinkle inside lightly with salt.

8. *Prepare Giblets.*

(a) Heart.—Press to extract blood; wash in cold, salted water.

(b) Liver.—Cut away gall-bladder carefully; wash liver in salted water.

(c) Gizzard.—Remove fat; cut in through the thick part to the sac; remove outer part from sac. Cut away the thick white lining; wash gizzard in salted water.

9. *Cook Giblets.*—Cut gizzard in small pieces; cover gizzard and heart with cold water; heat to boiling-point, and reduce heat, cooking until tender. When these have cooked 1 hr., add liver. The neck may be cooked with the giblets.

ROAST CHICKEN

1. Dress, clean, and stuff chicken.

2. Truss for roasting by turning tips of wings under back; press legs close back against body; hold in place with a skewer; tie a cord around ends of skewer and across the back.

3. Brush with melted fat; sprinkle with salt and pepper.

4. Place breast down in a shallow roasting pan. Do not add water. Leave uncovered.

5. There are several methods suggested for cooking fowl—as:—

Cover with several layers of cheese cloth dipped in melted fat;

Bake in a brown paper bag;

Cover with aluminum foil;

Coat with a paste of flour and butter.

(If a low temperature—325° F. is used it is not necessary to use any of the above mentioned.)

6. Allow 30-45 minutes to the pound. Thus a five pound bird would need 2½ to 3½ hours to cook.

7. When cooking time is half over, turn the bird and complete cooking.

8. Test for doneness—the drumstick meat is very soft when pressed between the fingers—or the thigh joint breaks or moves easily.

9. Remove from the oven and allow it to stand in a warm place for 20 minutes before carving. This allows the juices to set and makes carving easier.

DRESSING

2½ c. bread crumbs.	1 tsp. salt.
2½ tbsp. melted butter.	⅛ tsp. pepper.
1 tsp. summer savoury or thyme	1 tbsp. chopped parsley.

1. Add crumbs to melted butter; mix with a fork.

2. Add seasonings. If a moist dressing is preferred, add ¼ c. hot milk.

NOTE.—If fowl is not very young dress as above; then place in roasting-pan; add 1 c. boiling water; cover tightly. Roast, allowing 25-30 min. to the lb., and 25 min. extra. Uncover during last 45 min. to brown.

TO CUT CHICKEN FOR STEWING

1. Dress and clean chicken.
2. Cut off legs; separate into drumstick and thigh.
3. Cut off wings; remove tips.
4. Cut behind the wishbone and separate it from the breast.
5. Separate breast from back by cutting through ribs.
6. Cut the back into two pieces crosswise.

STEWED CHICKEN

1. Cut chicken into pieces for serving.
2. Cover with boiling water; boil 5 min.
3. Reduce heat; cook below boiling-point until tender.
4. Add ½ tbsp. salt after first half-hour.
5. Drain stock from chicken; measure; make up to required amount with milk or water. Thicken as for medium white sauce, adding seasonings as desired.
6. Arrange chicken on platter; pour over gravy.
7. Garnish and serve with hot tea biscuit, toast points, moulded steamed rice, or dumplings; garnish with parsley.

ROAST TURKEY

A turkey is dressed, stuffed and trussed in the same way as a roasting chicken. A large turkey will provide more meat at a lower price than a small one. A small turkey of 10-12 pounds will serve a family of five generously for two meals. A hen turkey has more meat in proportion to its weight, because of its thick plump breast. Hen turkeys seldom weigh more than 14 pounds. Allow 4½ to 5 hours at 300° F. for cooking a turkey of 16 pounds or over. A long slow cooking as for chicken is recommended.

QUESTIONS

1. What does the term "poultry" cover?
2. Is poultry any more easily digested than meat? Why?
3. Under what age must a chicken be to be called a "spring chicken"?
4. At what age does a chicken become known as a "fowl"?
5. What do we mean by "dressing" poultry?
6. How does the food value of poultry compare with that of meat?
7. Compare the connective tissue in meat with that in chicken.
8. Why is the leg of a chicken more tasty than the breast?
9. Which would you give to an invalid, the breast or the leg? Why?
10. What are the giblets? How would you prepare and serve them?

PRESERVATION OF FOOD

Preservation, as applied to food, is the process of preventing decomposition which is caused by the presence of enzymes and micro-organisms. These micro-organisms are moulds, yeasts and bacteria. To live and multiply, these spoilage agents require warmth, moisture and oxygen. Their growth may be controlled by:—

1. applying a low temperature (refrigeration and freezing);
2. applying a high temperature (canning);
3. drying (dried fruit);
4. excluding air (packing in water-glass, sand, etc.);
5. adding preservatives, such as sugar, salt, vinegar and spices (jelly-making, smoking and pickling).

Enzymes

Enzymes are the chemical substances, which bring about the normal ripening of fruit and vegetables. They cause spoilage if not checked, but, since enzymes are readily destroyed by heat during processing, they are not usually troublesome. If the fruit is under-processed, they may not be destroyed and there will be a darkening of the product. This type of spoilage is not harmful and the fruit may be used if the darkening is detected soon enough.

Moulds

Since mould and mould spores are readily destroyed by moist heat, spoilage of this type will not occur so long as the product has been sufficiently processed and remains sealed. A light growth of mould may be removed from the surface, the contents of the sealer brought to boiling point and used immediately.

Yeasts

The formation of gas (bubbling), results from yeast fermentation and makes this type of spoilage easily recognized. Since yeasts are readily destroyed by heat, fermentation will not occur if the product is sufficiently processed and the containers are airtight. Yeast fermentation is not harmful, but imparts a distinct flavour to food. When slight yeast fermentation occurs, boiling the canned fruit with a small amount of additional sugar generally makes it palatable.

Bacteria

In some cases, bacterial spoilage is readily detected by odour, gas, or cloudiness of the liquid, but, in other cases, no evidence is apparent. Bacteria, such as those causing botulism, produce spores which are extremely difficult to kill at boiling temperature unless the food is sufficiently acid. as in the case of fruit and tomatoes. It is, therefore, recommended that ALL NON-ACID FOODS—that is VEGETABLES (other than tomatoes), and MEATS SHOULD BE PROCESSED IN A PRESSURE COOKER. If a pressure cooker is not available and the boiling water bath is used, strict attention must be paid to all steps in canning and the full processing time must be given.

Flat Sour

This is the most common type of bacterial spoilage. The food develops an objectionable sour taste or rancid odour and should be discarded. The liquid is generally cloudy. It is most commonly found in peas, beans, corn and tomatoes.

Botulism

Bacteria, which cause botulism, are mostly found in the soil and are present on the outer skins of many vegetables. If vegetables are allowed to stand several hours after gathering, it is much more difficult to destroy the bacteria. The spores, when not destroyed in the canning process, produce an extremely poisonous toxin in the food, which may cause serious illness or death. This toxin will be destroyed if the HOME-CANNED VEGETABLES (except tomatoes) ARE BOILED FOR TEN MINUTES IN AN UNCOVERED SAUCEPAN BEFORE EVEN TASTING. Never taste any canned food that you suspect—destroy it, preferably by burning.

Sealers that have spoiled food in them should be sterilized, to prevent spoilage a second time. Boil sealers and glass lids ten minutes in a solution of ½ cup of washing soda to one gallon of water.

HOME CANNING OF FRUITS AND VEGETABLES

Equipment for Canning

Equipment, essential for successful home canning, consists of comparatively few articles, most of which are found in the average kitchen. Before commencing to can, it is important to see that the necessary equipment is on hand and in good order.

Containers

1. *Glass Sealers.*—Several types are available. All are equally satisfactory. Screw-top sealers—with metal screw band, glass lid and rubber ring. Spring-top sealers—with wire bails, glass lid and rubber rings.

Vacuum-type sealers—

(1) with metal screw band or clamp, metal or glass lid and rubber ring.

(2) with metal screw band or clamp, metal lid with sealing compound.

Glass sealers are sold in three sizes—

Small (so called pint)—capacity about 2 cups.

Medium (so called quart)—capacity about 4 cups.

Large (so called half gallon)—capacity about 8 cups.

The glass jars in which mayonnaise and other commercial products are packed are not satifactory for home canning because they will not necessarily withstand the high temperature.

Rubber rings are made in two widths. Be sure to buy the right sized ring. The narrow ring should be used only on screw-top sealers and the wider ring only on spring-top sealers. The boxes of rings made in Canada are marked with the trade names of the sealers on which the rings should be used.

2. *Tin Cans.*—There are three types sold for home canning. Be sure to use the cans as recommended below:—

Plain Can—a general purpose can, which may be used for all foods except those for which the R or Standard enamel can is recommended. Use only plain cans for tomatoes or tomato juice.

R or Standard Enamel Can—with bright, reddish gold lining, should be used for red berries, cherries, red plums, rhubarb and beets. The special enamel lining prevents the fading of the colour, which occurs when these foods are canned in Plain Cans.

DO NOT use R or Standard Enamel Cans for tomatoes or tomato juice.

C-enamel Can—with dull gold lining. This special lining prevents discoloration in corn. C-enamel cans may also be used for peas and pumpkin. DO NOT use C-enamel cans for fruits or tomatoes.

Can Covers—use plain R or Standard Enamel and C-enamel, to correspond with the three types of tin cans. The inside edge of the cover is lined with either a rubber compound or a paper gasket.

Tin cans for home canning are sold in two sizes:—

20 ounce.....capacity about 2½ cups
28 ounce.....capacity about 3½ cups

C-enamel cans are sold in 20 ounce size only.

Can Sealing Machines—for canning in tin cans, there are several types of sealing machines available. When buying a machine, choose one that is guaranteed to seal satisfactorily. The machine should be well made, durable and easy to operate.

Carefully follow specific directions supplied by the manufacturer.

Processors

1. *Boiling Water Bath*—A water bath canner or a large kettle, pail or wash boiler, with closely fitting cover, may be used. It should be fitted with a rack, which allows the circulation of water under sealers or cans. The canner should be deep enough to allow water to cover the containers by at least two inches. If the water does not cover the containers, the food will not cook evenly and the portion above the water may become discoloured.

2. *Pressure Canner*—This canner is especially designed to heat foods to a higher temperature than can be reached in the boiling water bath, oven or steamer. THE PRESSURE CANNER IS RECOMMENDED FOR ALL VEGETABLES (except tomatoes), MEAT AND FISH.

If using a pressure canner, carefully follow specific directions supplied by the manufacturer.

3. *Steamer*—A well constructed steamer, with a tight fitting lid or door, is satisfactory for processing fruits and tomatoes. Such a steamer consists of a reservoir for boiling water and, above it, a cooling compartment through which a lively current of steam circulates during the entire processing period.

Utensils—Essential utensils—sharp knives (preferably stainless steel), a colander, bowls, measuring cups and spoons, towels, pie plates and wooden spoons.

Useful utensils—jar lifter, wide mouthed funnel, strawberry huller, cherry pitter, small brush, wire basket and cheese cloth.

STEPS IN CANNING

1. Check Containers

Glass Sealers—carefully examine each part of the sealer. See that the sealer is not cracked and that the rim or glass lid is not chipped. Use new metal screw bands to replace any that have become cracked, bent, stretched or corroded. Be sure that the wire bails on the spring-top sealers spring into position with a snap. Metal lids having edges lined with sealing compound should not be used a second time.

Tin Cans—see that the rim of each can is smooth and in good condition. Do not use any cans that are badly dented.

2. Prepare Containers

Glass Sealers—wash sealers and glass lids thoroughly in hot, soapy water and rinse well with clear, hot water. Half fill each sealer with water and stand on rack in large kettle or boiler containing sufficient water to come about half-way up the sealers. If using glass lids, place on sealers. Bring water to boiling point and leave sealers in water until ready to fill.

Rubber Rings and Metal Lids—always use new rubber rings and new metal lids. Dip these into boiling water before placing on sealers.

Tin Cans—wash cans thoroughly in boiling water, rinse with boiling water and invert to drain. Since some covers have paper gaskets, do not put them into water. Simply wipe carefully with clean, slightly dampened cloth.

3. Prepare Syrup for Fruit

Estimate the amount of syrup required for fruit to be canned. Make syrup before preparing fruit, by adding water to sugar and bringing to boil. Skim syrup if necessary. Keep hot.

WHEN CANNING BY THE COLD PACK METHOD, for each medium (quart) sealer allow:—

¾ to 1 cup syrup for blueberries and saskatoons;

1 to 1½ cups syrups for raspberries, strawberries, gooseberries, cherries and rhubarb;

1½ to 2 cups syrup for apricots, plums, pears and peaches.

WHEN CANNING BY THE HOT PACK METHOD, use the minimum amounts of syrup suggested above.

Type of Syrup	Sugar	Water	Yield
1. Very thin	1 cup	3 cups	about 3½ cups syrup
2. Thin	1 cup	2 cups	about 2½ cups syrup
3. Moderately thin	1 cup	1½ cups	about 2 cups syrup
4. Medium	1 cup	1 cup	about 1½ cups syrup
5. Heavy	1 cup	¾ cup	about 1 cup syrup

4. Prepare Fruits and Vegetables

Sort—Sort fruit or vegetables for size and maturity. Immature or over-mature fruit and vegetables should not be canned. Unripe fruit and tomatoes should be allowed to ripen before canning. Bruised or spotted fruit should not be canned. If bruises are cut out, the good portions of the fruit may be used for jam or fruit juices.

Wash—Fruits and vegetables must be thoroughly washed. Wash only a small quantity at a time. To remove all sand, lift fruits or vegetables from the water instead of draining it off. A wire basket is excellent for this. Greens should be washed in several waters. Strawberries should be washed before hulling.

Blanch—Blanching consists of placing peaches or tomatoes in boiling water for 15 to 60 seconds, depending on maturity or variety, and then dipping immediately in cold water. The peaches or tomatoes should be removed from the water as soon as cool enough to handle. Blanching loosens the skins so that they will slip off easily. Only enough fruit for two or three containers should be blanched

at one time. A wire basket, large strainer or a square of cheese cloth may be used for blanching.

Peel—Some fruits and vegetables need peeling or scraping with a knife, in which case the thinnest possible portion should be removed.

Brine Bath—To prevent discoloration, peaches, pears, and apples should be placed, as soon as peeled, into a brine bath, made in proportion of 1 teaspoon salt to 1 quart (5 cups) cold water. Put in only sufficient fruit to fill two or three containers. Long standing in brine gives a definitely salty taste. Change brine, as it becomes discoloured. Drain fruit thoroughly before packing or pre-cooking.

5. Pack Containers

Work as quickly as possible when packing prepared fruits and vegetables into containers. To prevent sealers cracking, place the hot empty sealers on a dry cloth or folded paper. Fill the containers, one at a time, packing the food to *within 1 inch* of top of sealer. Then add liquid, leaving necessary head-space. After filling, work out air bubbles by running the blade of a knife down the sides of the container. With large fruits, tilt the containers to allow any trapped air to escape. Do not fill more containers than your processor will hold.

6. Methods of Packing Containers

1. *Cold Pack Method*—should be used for fruits and tomatoes only. It is recommended for use for soft fruits, such as raspberries. For fruits, prepare the desired type and necessary amount of syrup according to above directions. Pack fruit raw and cold into containers, then completely cover with hot syrup. For tomatoes, pack raw tomatoes into containers, cover with hot tomato juice and add salt *or* pack raw tomatoes into containers, pressing down until they are covered with their own juice and add ½ teaspon salt to each small (pint) sealer or 20 ounce can—1 teaspoon to each medium (quart) or 28 ounce can.

2. *Hot Pack Method*—must be used for all vegetables, except tomatoes, but it may also be used for tomatoes and most fruits. This method of packing helps prevent discoloration and allows a more solid pack.

Vegetables—Pre-cook vegetables in a covered kettle, then pack hot into containers, cover with the water in which they were cooked or with fresh boiling water and add salt—½ teaspoon to each small (pint) sealer or 20 ounce can—1 teaspoon to each medium (quart) sealer or 28 ounce can.

Corn, peas, greens, and broad beans should be packed loosely, to allow the heat to penetrate more readily into the centre of the container during processing.

Fruits—Prepare the desired type and necessary amount of syrup, according to the above directions. Simmer fruit in a small amount of the syrup in a large kettle, then pack into containers and cover with the hot syrup. Add extra syrup, if necessary. Only sufficient fruit to fill three or four containers should be simmered at a time, otherwise fruit may be unevenly cooked.

THE OPEN KETTLE METHOD IS NOT RECOMMENDED. With this method the fruit is cooked in an open kettle, packed in a sterilized jar and sealed, without further processing. There is frequent loss due to spoilage, because of contamination while filling the sealers.

Head Space—This is the space between the surface of the liquid and the rim of

the container. Leaving proper head space helps to prevent loss of liquid from sealers or the bursting of tin cans.

Fill glass sealers with liquid to within one-half inch of top, except in the case of corn and peas, which expand more than other foods, during processing. For corn and peas, allow one inch head space.

Fill the can with liquid to within ¼ inch of top, except with corn and peas, which require ½ inch head space.

7. Close Containers

After filling each container, make sure there are no seeds or particles of food adhering to the rim. Close as directed below.

Glass Sealers—

Screw-top Sealer—Fit wet rubber ring on sealer, making sure it is flat, then put lid in place. Partially seal, by screwing metal band tightly. Loosen slightly, unscrewing not more than an inch.

Spring-top Sealer—Fit wet rubber ring on sealer, making sure it is flat, then put lid in place. Partially seal, by pushing the long wire bail into groove on lid, but do not spring down the lower bail.

Vacuum-type Sealer—For the type with separate rubber ring, place wet rubber ring on lid, then put lid in place. For the type having edge of metal lid lined with sealing compound, dip lid in boiling water and put in place. Then screw metal band as tightly as possible or adjust metal clamp.

Tin Cans—

Place lid on top of can and close with sealing machine, according to manufacturer's directions.

8. Process Fruits and Vegetables

Have processor ready, so that the containers may be placed in it immediately after closing. NEVER ALLOW FILLED SEALERS OR TIN CANS TO STAND AND COOL BEFORE PROCESSING.

Processing is the heating of filled containers to a sufficiently high temperature for a sufficient length of time to destroy any bacteria, yeasts or moulds that might cause the food to spoil. Allow exact processing time.

When Using a Boiling Water Bath—

1. Place filled sealers on rack, one inch apart. The water in the bath should be near the temperature of the filled containers. Cans may be stacked, but they must be arranged so that there is sufficient space for circulation of water around, over and under each can.

2. Add boiling water to cover tops of sealers or cans by at least two inches. Do not pour boiling water directly on sealers, as tops may crack.

3. Put cover on boiling water bath.

4. Bring water to boiling point. Start to count processing time from moment water is actually boiling vigorously, not just beginning to show bubbles.

5. Keep water boiling until processing is finished. If necessary, add boiling water to keep two-inch depth over containers.

6. Process the required time for fruit or vegetable. (See Time Table for Processing of Fruits and Vegetables).

7. Immediately remove sealers or cans from water bath to prevent over-cooking.

When Using a Pressure Cooker—

1. Keep the pressure canner clean, particularly the openings to the petcock, safety valve and pressure gauge. Make sure the gasket is clean and fits perfectly. Replace if necessary. Never immerse the pressure gauge in water.
2. Carefully follow manufacturer's directions.
3. Process fruit or vegetable the required time.

9. Seal Containers

After removing glass sealers from processor, place on folded, dry cloth or newspapers. To avoid cracking, do not place sealers in draughts or on metal or porcelain surfaces. As soon as all bubbling in sealers has ceased, tighten tops on screw-top or spring-top sealers, by giving the metal bands a final turn or springing down the lower bail.

Vacuum-type sealers require no further tightening, since the seal is formed as they cool.

NEVER OPEN A SEALER AFTER PROCESSING. Sometimes the contents of a sealer will shrink in processing, leaving space at the top of the sealer. If the sealer is air-tight and sufficiently processed, the food will keep perfectly.

10. Cool Containers

Cool sealers in an upright position, out of draughts and uncovered.

Leave space between the sealers while cooling.

Never tighten or remove the band after a screw-top sealer is cold.

Cool tin cans by plunging them immediately into cold water after removing them from the processor. Leave until cold, changing the water to hasten cooling.

11. Test for Seal

Screw-top or Spring-top Sealers—When cold, carefully invert each one for a minute or two, to see if there is a leakage.

Vacuum-type Sealers with Metal Lids—When cold, gently tap lids with a spoon. If properly sealed they will give a clear ringing note and be curved slightly inward. Never invert vacuum-type sealers.

If the seal is not air-tight, use the food before it spoils. Re-processing is not recommended.

12. Store Containers

Before storing, wipe containers with a damp cloth, then dry thoroughly.

Label containers, especially tin cans.

After one week, examine each sealer for any signs of spoilage and tin cans for leakage or bulging.

Store containers in a dry, dark place, where the temperature is uniform, preferably cool. If the storage place cannot be kept dark, wrap each sealer in newspaper or store in cartons, since light affects the colour of the food.

PROCESSING TIME-TABLE FOR VEGETABLES

	Directions		"Small" Sealers (pint) 20 oz. Cans	"Medium" Sealers (quart) 28 oz. Cans
Asparagus	Wash, break off tough end of stalks. Remove scales if necessary. Cut in lengths to fit containers. Tie in uniform bundles, stand upright in sufficient boiling water to come halfway up stalks. Cover, bring to boil and boil 3 minutes. Pack hot, all tips up, except 3 with tips down, in centre. Add salt. Cover with boiling water, leaving head-space.	Pressure Canner (10 lb. pressure) Boiling Water Bath	30 mins. 2 hrs.	35 mins. 2 hrs.
Beans Green or Wax	Wash young tender beans. Trim ends, string if necessary. Leave whole or cut in pieces. Cover with boiling water. Bring to boil and boil, covered, 3 minutes. Pack hot. Add salt. Cover with hot cooking liquid from beans, leaving head-space.	Pressure Canner (10 lb. pressure) Boiling Water Bath	30 mins. 2 hrs.	35 mins. 2 hrs.
Beets	Wash small, young beets. Leave on roots and 2 inches of stem. Cover with boiling water. Bring to boil and boil, covered, until skins slip off easily, about 20 minutes. Remove skins and roots. Pack hot. Add salt. Cover with boiling water, leaving head-space.	Pressure Canner (10 lb. pressure) Boiling Water Bath	30 mins. 2 hrs.	35 mins. 2 hrs.
Carrots	Wash and scrape young tender carrots. Cover with boiling water. Bring to boil and boil, covered, 5 minutes. Pack hot in upright position, alternating stem and root ends. Add salt. Cover with boiling water, leaving head-space.	Pressure Canner (10 lb. pressure) Boiling Water Bath	30 mins. 2 hrs.	35 mins. 2 hrs.
Corn Whole Kernel	Cover cobs with boiling water. Bring to boil and boil, covered, 4 minutes. Cold dip. Cut whole kernels from cob. Add boiling water, using half as much water as corn. Bring to boil and pack hot, very loosely, leaving head-space. Add salt.	Pressure Canner (10 lb. pressure) Boiling Water Bath	55 mins. 3 hrs.	65 mins. 3 hrs.

PROCESSING TIME-TABLE FOR VEGETABLES *(Cont'd)*

	Directions		"Small" Sealers (pint) 20 oz. Cans	"Medium" Sealers (quart) 28 oz. Cans
Corn Cream Style	Wash cobs. Slice thin layer from kernels of cob. Next, slice remainder of kernels from cob to remove any cream or juice. Add boiling water, using half as much water as corn. Bring to boil, stirring to prevent scorching. Pack hot, very loosely, leaving head-space. Add salt.	Pressure Canner (10 lb. pressure) Boiling Water Bath	65 mins. 3 hrs.	—— ——
Greens Spinach Chard Beet tops Kale	Wash thoroughly. Cook, covered in very little water until thoroughly wilted, about 5 to 8 minutes, turning several times during cooking. Pack hot, loosely. Cut greens crosswise with a sharp knife to bottom of container. Add salt. Cover with boiling water, leaving head-space.	Pressure Canner (10 lb. pressure) Boiling Water Bath	50 mins. 3 hrs.	60 mins. 3 hrs.
Peas	Shell and wash young tender peas. Cover with boiling water. Bring to boil and boil, covered, 1 minute. Pack hot, loosely. Add salt. Cover with hot cooking liquid from peas, leaving head-space.	Pressure Canner (10 lb. pressure) Boiling Water Bath	40 mins. 3 hrs.	45 mins. 3 hrs.
Pumpkin and Squash	Cut or break apart. Remove seeds and stringy fibres. Cut into pieces. Steam, bake or boil in small amount of water until tender. Scrape from skins and mash or sieve. Bring to boiling point, adding a little water, if necessary, to prevent scorching. Pack hot, leaving head-space.	Pressure Canner (10 lb. pressure) Boiling Water Bath	70 mins. 3 hrs.	80 mins. 3 hrs.
Mushrooms	Wash and peel. Drop into acidulated water (1 tablespoon vinegar per quart of water). Drain. Boil 3 minutes in fresh water to which vinegar and salt are added (1 tablespoon vinegar and 1 teaspoon salt per quart water). Pack hot. Cover with boiling water, leaving head-space.	Pressure Canner (10 lb. pressure) Boiling Water Bath	30 mins. 2 hrs.	35 mins. 2 hrs.

PROCESSING TIME-TABLE FOR FRUITS

	Directions		"Small" Scalers (pint)	"Medium" Scalers (quart)
Apples	Syrup to use—Thin. *Hot Pack*—Wash, peel, core and slice or quarter, drop in brine bath. Drain. Bring to boil in syrup and simmer 3 minutes. Pack hot, leaving head-space.	Boiling Water Bath	15 mins.	15 mins.
Apple Sauce	*Hot Pack*—make applesauce, sweeten if desired. Pack hot, leaving head-space.	Boiling Water Bath	15 mins.	15 mins.
Apricots	Syrup to use—Moderately thin. *Cold Pack*—Wash, halve and pit or leave whole. Pack, cups down if halved. Cover with boiling syrup, leaving head space.	Boiling Water Bath	20 mins.	25 mins.
	Hot Pack—Wash, halve and pit or leave whole. Bring to boil in syrup and simmer 3 minutes. Pack hot, leaving head-space.	Boiling Water Bath	15 mins.	15 mins.
Berries except Straw-berries	Syrup to use— Blueberries—very thin. Blackberries, saskatoons—thin. Raspberries—moderately thin or medium. Gooseberries, loganberries — medium or heavy. *Cold Pack*—Wash. (Top and tail gooseberries). Pack. Cover with boiling syrup, leaving head-space.	Boiling Water Bath	15 mins.	20 mins.
Cherries	Syrup to use— Sweet Cherries—thin. Sour Cherries—medium or heavy. *Cold Pack*—Wash, stem, pit if desired. Pack. Cover with boiling syrup, leaving head-space.	Boiling Water Bath	20 mins.	25 mins.
	Hot Pack—Wash, stem, pit if desired. Bring to boil in syrup and simmer 3 minutes. Pack hot, leaving head-space.	Boiling Water Bath	15 mins.	15 mins.

PROCESSING TIME-TABLE FOR FRUITS *(Cont'd)*

	Directions		"Small" Sealers (pint)	"Medium" Sealers (quart)
Peaches	Syrup to use—Moderately thin.			
	Cold Pack—Blanch 15 to 60 seconds, cold dip. Remove skins and pit. Drop in brine bath. Drain. Leave in halves or slice. Pack, cups down if halved. Cover with boiling syrup, leaving head-space.	Boiling Water Bath	20 mins.	25 mins.
	Hot Pack—Blanch 15 to 60 seconds, cold dip. Remove skins and pit. Drop in brine bath. Drain. Leave in halves or slice. Bring to boil in syrup and simmer 3 minutes. Pack hot, leaving head-space.	Boiling Water Bath	15 mins.	15 mins.
Pears	Syrup to use—very thin.			
	Cold Pack—Wash, peel, halve or quarter, remove core. Drop in brine bath. Drain. Pack, cups down. Cover with boiling syrup, leaving head-space.	Boiling Water Bath	20 mins.	25 mins.
	Hot Pack—Wash, peel, halve or quarter, remove core. Drop in brine bath. Drain. Bring to boil in syrup and simmer tender-fleshed varieties 3 minutes; firm-fleshed varieties 5 minutes. Pack hot, leaving head-space.	Boiling Water Bath	15 mins.	15 mins.
Plums	Syrup to use— Sour Plums—moderately thin Prune Plums—thin.			
	Cold Pack — Wash. Leave whole or halve and pit. Pack. Cover with boiling syrup, leaving head-space.	Boiling Water Bath	15 mins.	20 mins.
	Hot Pack—Wash. Leave whole or halve and pit. Bring to boil in syrup and simmer 2 minutes. Pack hot, leaving head-space.	Boiling Water Bath	10 mins.	10 mins.
Rhubarb	Syrup to use—medium.			
	Cold Pack—Wash, cut in ½-inch pieces. Pack. Cover with boiling syrup, leaving head-space.	Boiling Water Bath	10 mins.	15 mins.

PROCESSING TIME-TABLE FOR FRUITS *(Cont'd)*

	Directions		"Small" Sealers (pint)	"Medium" Sealers (quart)
Straw-berries	Syrup to use—medium or heavy			
	Cold Pack—Wash, hull. Bring slowly to boil in syrup. Cover, remove from heat and let stand 1 hour. Pack, leaving head-space.	Boiling Water Bath	15 mins.	20 mins.
	Hot Pack—Wash, hull. Bring syrup to boil in kettle, add strawberries. Cover, remove from heat and let stand 1 hour. Bring to boil. Pack hot, leaving head-space.	Boiling Water Bath	10 mins.	10 mins.
Sweet Red Peppers	*Cold Pack*—Wash. Cover peppers with boiling water, bring to boil, covered, for 10 minutes; *Or* place on a tray in a very hot oven (450° F.) for 6 to 8 minutes, turning several times, until skins blister. Cold dip. Remove skins, cores and seeds. Pack cold. Add ½ teaspoon salt per "small" (pint) sealer. Do not add any liquid.	Boiling Water Bath	40 mins.	—
Tomatoes	*Cold Pack*—			
	1. Blanch 15 to 60 seconds, cold dip, remove stem end, peel. Pack. Add ½ teaspoon salt per "small" (pint) sealer. Cover with hot tomato juice, leaving head-space.	Boiling Water Bath	25 mins.	30 mins.
	2. Blanch, cold dip, remove stem and peel. Quarter or leave whole. Pack, pressing down until tomatoes are covered with their own juice, leaving head-space. Add ½ teaspoon salt per "small" (pint) sealer.	Boiling Water Bath	30 mins.	35 mins.
	Hot Pack—Blanch, cold dip, remove stem end, peel. Quarter or leave whole. Heat to boiling point. Pack hot, leaving head-space. Add ½ teaspoon salt per "small" (pint) sealer.	Boiling Water Bath	15 mins.	15 mins.

PROCESSING TIME-TABLE FOR FRUITS *(Cont'd)*

	Directions		"Small" Sealers (pint)	"Medium" Sealers (quart)
Tomato Juice	*Hot Pack*— 1. Wash tomatoes, remove core, cut into pieces. Bring to boil and simmer, covered, 5 minutes. Press through sieve or pureer. Bring juice to boiling point. Pour into containers, leaving head-space. Add ½ teaspoon salt per "small" (pint) sealer.	Boiling Water Bath	15 mins.	15 mins.
	2. Wash, remove core. Extract juice, using juice extractor. Heat juice to boiling point. Pour into containers, leaving head-space. Add ½ teaspoon salt per "small" (pint) sealer.	Boiling Water Bath	15 mins.	15 mins.
Currant Juice	*Hot Pack*— Wash, measure and crush currants thoroughly. Add 1 cup water per cup of currants. Bring to boil and simmer, covered, 10 minutes. Strain through moistened jelly bag. Add sugar if desired. Reheat to boiling point. Pour into hot containers, leaving head-space.	Boiling Water Bath	10 mins.	10 mins.
Grape Juice	*Hot Pack*— Wash, stem and crush grapes. Add water, allowing 2½ cups per 6-quart basket of grapes. Bring to boil, and simmer, covered, 15 minutes. Strain through moistened jelly bag. Add sugar if desired. Reheat to boiling point. Pour into hot containers, leaving head-space.	Boiling Water Bath	10 mins.	10 mins.
Rhubarb Juice	*Hot Pack*— Wash and cut rhubarb into small pieces. Add water, using half as much water as rhubarb. Bring to boil and simmer, covered, 5 minutes. Strain through moistened jelly bag. Add sugar if desired. Reheat to boiling point. Pour into hot containers, leaving head-space.	Boiling Water Bath	10 mins.	10 mins.

Canning at High Altitudes

When using the boiling water bath, increase the processing time by one-fifth for each 1000 feet over the 1500 feet above sea level.

When using the pressure canner, increase the pressure by 1 pound for each 2000 feet above sea level.

SPECIAL METHODS OF CANNING FRUIT

Dry Sugar Method

Half fill the sealer or can with fruit, then add sugar and fruit in alternate layers. Cover fruit with boiling water, leaving headspace. Close container and tilt several times to dissolve sugar. Process as for Cold Pack (see Time Tables).

QUANTITIES OF SUGAR TO USE IN DRY SUGAR METHOD

For 1 "medium" (quart) sealer (large fruit)		For 1 "medium" (quart) sealer (small fruit)	
SUGAR	EQUIVALENT SYRUP	SUGAR	EQUIVALENT SYRUP
½ cup	Very thin	1/3 cup	Very thin
2/3 cup	Thin	½ cup	Thin
¾ cup	Moderately thin	2/3 cup	Moderately thin
1 cup	Medium	¾ cup	Medium
1¼ cup	Heavy	1 cup	Heavy

Solid Pack Method

This method is especially recommended for rhubarb, blue-berries and cherries to be used in making pies or puddings. It may also be used for other fruits.

Wash, prepare fruit and crush part of it in the bottom of a preserving kettle. Add remaining fruit and heat for a few minutes. Stir occasionally, and, if necessary, add a little water to prevent scorching. Pack in sealers or cans, crushing fruit down slightly so that it is covered with its own juice. Sprinkle between layers of fruit the amount of sugar recommended for dry-sugar canning. Leave headspace and process as for Cold Pack. (See Time Tables.)

Sugarless Method

Follow Solid Pack method but omit sugar. The keeping quality of canned fruit does not depend on the addition of sugar but rather on sufficient processing and the use of air-tight containers. However, the colour and flavour of some fruits are retained better when some sugar is added.

AMOUNT OF RAW FOOD REQUIRED FOR A YIELD OF ONE QUART

FRUIT	WEIGHT (pounds)	VEGETABLE	WEIGHT (pounds)
Apples	2¼	Asparagus	3¼—4
Apricots	1¾	Beans Lima	4 —5
Berries	1¼—1½	Snap	1½
Cherries	1½—2½	Beets baby	
Grapes	2½	without tops	2½
Peaches	2—2½	Carrots	2½
Pears	2—2½	Corn	6—8 cars
Plums	1½—2	Greens	1½—2½
		Peas	4
		Pumpkin	4
		Tomatoes	2½—3½

SAFETY RULES

1. Never taste suspected food.
2. Use standard glass sealers manufactured for that purpose.
3. Use tongs, or thick pot holders when handling hot sealers or cans.
4. Leave the required head space when filling sealers or cans.
5. To prevent breakage of sealers, avoid sudden changes of temperatures. Never put hot sealers down on a porcelain or cold surface. Never let hot sealers stand in a draught.
6. Remove the cover of canner by lifting it away from you.

JAMS AND CONSERVES

Jams and conserves are made by boiling fruit with a large proportion of sugar in an open kettle until thick and even textured. The sugar acts as a preservative because it produces a condition unfavourable to the growth of micro-organisms.

A good jam has these characteristics:

1. A characteristic fruit flavour.
2. A thick even texture.
3. No undissolved sugar.
4. No separated juice.

STEPS IN MAKING JAM

1. Wash, rinse and sterilize jars. Jars may be sterilized in several ways. The simplest method is to cover the rinsed jars with hot water, or invert them in 1 to 2 inches of hot water—bring to a boil and boil 15 minutes. Leave in hot water until needed.

2. Select firm, ripe fruit, and prepare fruit according to directions given in recipes. Measure prepared fruit accurately, using not more than 3 quarts for one lot of jam.

3. Put fruit in uncovered preserving kettle, adding water when indicated in recipe. Pre-cook all fruits, except apricots, peaches and pears, before adding sugar. Bring to the boil and pre-cook, uncovered, for required time. Count time from

the moment fruit begins to boil vigorously, stirring frequently to prevent sticking. With apricots, peaches and pears, mix sugar with fruit and allow to stand at least 1 hour before boiling to the jam stage.

4. After pre-cooking, add sugar, bring to the boil, and boil, uncovered, for required time, stirring frequently. Count time from the moment jam begins to boil vigorously.

5. As final temperatures of jams vary considerably, depending on fruits used, and as recommended boiling times can be only approximate, the jam should be tested for consistency. To test jam, remove kettle from heat, place a teaspoon of jam on a cold saucer and chill quickly. If jam does not set to proper thickness, cool a few minutes longer and test again. Since gooseberry and damson plum jams thicken considerably after cooling, care must be taken not to cook jam to too thick a consistency.

6. Pour hot jam into hot sterilized jars, leaving at least ¼ inch head-space at top of jar. Using a slightly moistened clean cloth, carefully remove any trace of fruit or syrup clinging to the inside of the jars above the jam level. Then wipe with a clean, dry cloth. This ensures a better seal when paraffin is added.

7. Cool slightly, then pour a thin layer of melted paraffin over jam rotating the jar so that the wax will adhere to the glass to form a close seal. Leave until hardened, then add a second layer of melted wax, again rotating the jar. Cover with paper or metal lid and store in a cool, dry place.

Commercial Pectin:

If using commercial pectin to make jams, follow the manufacturer's directions exactly.

Fruit	Amount of Prepared Fruit	Directions	Water	Pre-cook Time	Sugar	Boiling Time	Approx. Yield
Apricot	12 cups, quartered or cut in pieces	Wash, remove pits and cut into quarters or small pieces. Add sugar, let stand 1 hour. Add 2 tablespoons vinegar or lemon juice. Bring to boil and boil, uncovered, to jam stage.	Cups —	Mins.	Cups 7	Mins. 10 to 12	Cups 9
Black Currant	6 cups	Wash, top and tail. Add water, bring to boil and pre-cook, uncovered. Add sugar, boil, uncovered, to jam stage.	5	15	6½	5 to 8	7½
Black Currant and Rhubarb	4 cups 4 cups, cut	Wash, top and tail black currants. Wash, trim and cut rhubarb into ½-inch pieces. Combine fruit, add water and pre-cook, uncovered. Add sugar, bring to boil and boil, uncovered, to jam stage.	2½	10	6½	4 to 7	7
Green Gooseberry	12 cups, (3 quart-boxes)	Wash, top and tail. Add water, bring to boil and pre-cook, uncovered. Add sugar, bring to boil, uncovered, to jam stage.	3	15	7½	5 to 7	8
Peach	12 cups, cut in pieces	Wash, blanch 15 to 60 seconds, cold dip, Remove skins, pit and cut into pieces. Add sugar and let stand 1 hour. Add 2 tablespoons vinegar or lemon juice. Bring to boil and boil, uncovered, to jam stage.	—	—	6	15 to 20	9
Plum (except Damson	12 cups, quartered	Wash, remove pits and cut into quarters. Add water, bring to boil and pre-cook, uncovered. Add sugar, bring to boil and boil, uncovered, to jam stage.	½	10	7	6 to 8	9½
Plum Damson	8 cups	Wash. Add water, bring to boil and pre-cook, uncovered. Add sugar, bring to boil and boil, uncovered, to jam stage. Remove as many pits as possible as they rise to surface.	3	15	7	6 to 8	7½
Raspberry	8 cups, crushed (4-quart-boxes)	Wash, crush and measure. Bring to boil and pre-cook, uncovered. Add sugar, bring to boil and boil, uncovered to jam stage.	—	15	6	12 to 15	7
Strawberry and Rhubarb	6 cups crushed 4 cups,cut	Wash, hull, crush and measure strawberries. Wash, trim stalks and cut rhubarb into ½-inch pieces. Combine fruit, bring to boil and pre-cook, uncovered. Add sugar, bring to boil and boil, uncovered to jam stage.	—	15	6	10 to 12	6½

JELLIES

To make a perfect jelly, pectin, acid, sugar and water must be in the right proportions. Fruits vary in the amounts of pectin and acid they contain.

FRUITS RICH IN BOTH PECTIN AND ACID: crabapples, sour apples, cranberries, currants, gooseberries, sour plums, grapes.

FRUITS RICH IN PECTIN, BUT LOW IN ACID: quinces, sweet apples.

FRUIT RICH IN ACID, BUT LOW IN PECTIN: strawberries, cherries, rhubarb, pineapples, raspberries, loganberries.

FRUITS LOW IN BOTH PECTIN AND ACID: peaches, pears, blueberries. If a fruit is low in either pectin or acid, it may be combined with one or more fruits rich in the needed pectin or acid. Pectin and acid change with the maturity of the fruit, both decreasing as the fruit ripens. For best results, therefore, use a mixture of slightly under-ripe and ripe fruit. NEVER use over-ripe fruit for making jelly.

For fruits low in pectin, it is a money and time economy to use either the powdered or liquid form of commercial pectin. It is important to follow the manufacturer's directions exactly.

PECTIN TEST

To determine whether a fruit juice can be used alone for jelly making, or whether more pectin will have to be added, use one of the following tests.

Alcohol Test

Measure 1 teaspoon fruit juice and 1 teaspoon rubbing alcohol into a cup or small dish. Blend quickly together and let stand 30 seconds. If a jelly-like mass or clot is formed, the juice contains sufficient pectin. Sugar may then be added. DO NOT TASTE THIS MIXTURE—RUBBING ALCOHOL IS POISONOUS.

Epsom Salts Test

To 1 teaspoon cooked fruit-juice add ½ teaspoon of Epsom Salts and 1 teaspoon sugar. Stir the mixture until salts are dissolved and let stand twenty minutes. If the mixture becomes thick and jelly-like, the juice contains sufficient pectin for making jelly.

GOOD JELLY HAS THESE CHARACTERISTICS

1. A characteristic fruit flavour.
2. A tender texture, easy to cut with a spoon.
3. Quivers, but holds its shape when removed from container.
4. An attractive, transparent colour.

STEPS IN MAKING JELLY

1. Sterilize jelly glasses or jars as for jam making.
2. Select sound fruit, using about equal parts of ripe and slightly under-ripe fruit.
3. Wash thoroughly and discard any damaged spots.
4. Prepare fruit according to directions given below.
5. Add cold water, using proportion of water to prepared fruit, as given below.
6. Simmer fruit and water in a covered kettle until fruit is soft and mushy, crushing during cooking.

7. Pour hot cooked fruit into a moistened jelly bag made of factory cotton or several thicknesses of fine cheesecloth. Hang up over a bowl and allow to drain until dripping ceases.

Squeezing the bag increases the quantity of juice, but the jelly will be cloudy.

8. Work with small amounts of extracted juice at a time—not more than 8 cups. Measure each lot of juice accurately, to determine the amount of sugar to be added after boiling.

9. Boil juice, uncovered, in a broad saucepan for three minutes. Remove saucepan from heat and test for pectin. If clot does not form, continue boiling, testing frequently, until pectin test is satisfactory.

10. Measure sugar, allowing ¾ cup sugar for each cup of extracted juice, except when a heavy solid clot forms when pectin test is made, at the end of the 3-minute boiling period. This heavy clot indicates that the juice is so rich in pectin that 1 cup of sugar for each cup of extracted juice should be used.

11. Add measured sugar slowly to juice. Boil briskly, uncovered, removing scum as it forms.

12. To test when jelly is done, dip up the boiling syrup with a metal spoon, holding well above kettle, and allow it to run off the edge. When two drops form and then flow together to form a "sheet", the jelly stage has been reached. Immediately remove from the heat. Longer boiling will give a stiff, tough jelly.

13. Let hot juice stand in kettle for about 1 minute and remove last bit of scum with a cold fork or spoon.

14. Pour into hot, sterilized jelly glasses, filling to within ¼ inch of the top. Using a slightly moistened, clean cloth, carefully remove any trace of jelly clinging to the inside of the glass above the jelly level. Then wipe with a clean, dry cloth. This ensures a better seal when paraffin is added.

15. Let stand until partially set, then pour a thin layer of hot, melted paraffin wax to completely cover the jelly and leave until hardened. Then add a second layer of hot wax, rotating so that wax adheres to glass. Cover with paper or metal lid and store.

CELLULOSE METHOD OF EXTRACTING FRUIT JUICE IN JELLY MAKING

Place 10 sheets of unscented cleaning tissue in a saucepan and add 2 quarts of hot water. Stir with a spoon to break up the tissues, then turn the mass into a sieve and shake but do not press out the excess water. This will prevent tissues from absorbing fruit juice. Return tissue mass to the saucepan and add 6 to 8 cups crushed fruit, approximately 2 to 3 pounds. Add additional water if required, as in the case of firm fruits or fruits rich in pectin, like apples, crabapples, quince and currants. Boil until fruit is tender, stirring constantly.

The tissues, composed of cellulose or wood fibres, break down cell walls of the fruit and allow the juice to escape. Place fruit in scalded jelly bag and as soon as bag is cool enough to handle, squeeze out juice by force. It is not necessary to let the fruit drip for hours or overnight, because the tissues filter the juice and make it clear. From this point on, proceed in the usual way to make jelly.

This method will give at least 1½ to 2 times as much juice as the conventional method of cooking the fruit to extract the juice.

Fruit	Preparation	Amount of Cold Water
Apple	Wash, remove stems and blossom ends, cut into eighths, or slice.	To completely cover prepared fruit.
Chokecherry and Apple	Wash and stem chokecherries, crush in bottom of kettle. Wash apples, stem, cut into eighths. Prepare equal quantities of both fruits.	To come just below top layer of prepared fruit.
Crabapple	Wash, stem, cut into quarters.	To completely cover prepared fruit.
Currant, Red	Wash, stem.	¾ cup water for each cup prepared fruit.
Currant, Black	Wash, stem.	1¼ cups water for each cup prepared fruit.
Gooseberry (Green)	Wash, stem.	¾ cup water for each cup prepared fruit.
Grape	Wash, stem.	To come just below top layer of prepared fruit.
Plum, sour	Wash, stem, cut into halves or quarters, leave in pits.	To come just below top layer of prepared fruit.
Quince and Apple	Wash quinces and apples thoroughly, remove stems and blossom ends, cut into quarters. Prepare equal quantities of both fruits.	To completely cover prepared fruit.
Quince and Grape	Wash quinces, remove stems and blossom ends, cut into quarters. Wash and stem grapes. Prepare equal quantities of both fruits.	To come just below top layer of prepared fruit.
Raspberry and Red Currant	Wash raspberries. Wash and stem currants. Prepare equal quantities of both fruits.	¼ cup water for each cup prepared fruit.

MARMALADES

GRAPEFRUIT MARMALADE I

1 grapefruit.
1 orange.
1 lemon.
Water.
Sugar.

1. Wipe fruit and slice very thinly, rejecting only seeds and core of grapefruit.
2. Measure and add three times the quantity of water.
3. Let stand overnight in an earthenware dish.
4. Next morning boil 10 min. Leave until next day.
5. Then boil 2 hr. Measure, add an equal amount of sugar, and boil about 1 hr., stirring occasionally to keep from burning. Test as for jelly.
6. Pour into sterilized glasses; let stand until firm; then cover with melted paraffin.

GRAPEFRUIT AND ORANGE MARMALADE II

1 grapefruit.
1 orange.
1 lemon.
12 c. water.
10 c. sugar.
Juice of 1 lemon.

1. Wipe the fruit. Squeeze out juice. Reserve seeds.
2. Cut rind into very fine strips or put through the meat-chopper.
3. Put rind and juice in the kettle. Add 11 c. water. Cover. Let stand overnight.
4. Cover seeds with 1 c. water. Cover and let stand overnight. In the morning add water from the seeds to the rind. Tie seeds in a cheese cloth bag and put into kettle.
5. Boil uncovered until rind is very soft and liquid has been reduced to one-half. Remove seeds at the end of the first hour.
6. Test fruit-juice for pectin.
7. Add sugar, heated. Stir until dissolved. Cover. Heat to boiling; then boil uncovered 10 to 20 min. or until the syrup will jell.
8. Add lemon-juice. Remove from heat. Pour into sterilized glasses and let stand until cold.
9. Cover the top with melted paraffin.

PEACH CONSERVE

6 qt. peaches.
8 oranges.
1 lemon.
1 lb. nuts.
Sugar.

1. Blanch, peel, and slice peaches.
2. Squeeze juice and pulp from oranges; put rind through a mincer or chop fine.
3. Put peaches in kettle; add fruit-juice and rind.
4. Weigh; add 1 lb. sugar to 1 lb. fruit.
5. Cook until clear; stir frequently.
6. Add lemon-juice and chopped nuts; cook 5 min.
7. Bottle, seal when cold.

RHUBARB MARMALADE

4 lb. rhubarb.
4 lb. sugar
¼ lb. walnuts.
2 lemons, juice and rind.
3 oranges, juice and rind.

1. Wash and peel rhubarb. Cut in pieces.
2. Add fruit-juices, rind, and sugar, and boil 30 min.
3. Add walnuts cut in pieces.
4. Cook 10-15 min. or until thick.

GINGER PEARS

4 lb. pears.
4 lb. sugar.
2 lemons.
2 oz. preserved ginger.
¾ c. water.

1. Select firm pears. Wipe. Quarter, core, and peel. Cut in pieces.
2. Add water, sugar, and grated rind of 1 lemon.
3. Simmer until pears are a rich-red colour and syrup is thick.
4. Add lemon-juice and ginger cut in small pieces. Cook 10 min.
5. Pour into sterilized glasses and seal.

PEACH MARMALADE

(Makes 1 pint)

6 peaches.
1 medium orange.
sugar.

1. Blanch peaches—remove skin and stone.
2. Put through food chopper.
3. Wash orange and put through chopper, skin and all.
4. Combine fruit and measure.
5. Add as much sugar as fruit by cup.
6. Stir, boil slowly for 20 minutes.
7. Pour into sterilized jars. Seal. This marmalade will not keep indefinitely. It should be kept in a cool dry place and used within two or three months after making.

PEAR MARMALADE

6 pears, medium size.
1 orange.
½ lemon.

1. Wash, peel and core pears.
2. Put through food chopper.
3. Wash orange and lemon—cut in quarters and put through chopper.
4. Combine fruit.
5. Add 1 cup of sugar for each cup of fruit.
6. Boil slowly, 20 minutes.
7. Pour into sterilized jars—seal.

CRANBERRY JELLY

1 qt. cranberries.
1 c. boiling water.
2 c. sugar.

1. Boil cranberries until soft.
2. Rub through sieve.

3. Add sugar and cook without stirring until it jells, about 5 min.
4. Pour into moistened moulds; set away to cool.

NOTE.—Straining may be omitted if desired.

GRAPE CONSERVE

4 qt. grapes.
2 oranges—juice and rind.
2 lemons—juice and rind.
1 c. chopped nuts.
Sugar.
½ tsp. salt.

1. Wash the fruit. Remove the grapes from the stems; remove the skins from the pulp.
2. Cook the pulp until soft; strain to remove the seeds.
3. Place the strained pulp and skins in a preserving-kettle.
4. Extract the juice from the oranges and lemons; then put the rinds through a food-chopper.
5. Add the lemon and orange juice and rind to the grape mixture and cook for 1 hr.
6. Measure the mixture; then add an equal quantity of sugar and the nuts and salt.
7. Continue cooking until thick; pour into sterilized glasses.
8. When cool, cover with paraffin and cover as for jelly.

PICKLES AND RELISHES

In pickling, vinegar and spices act as preservatives.

POINTS ON PICKLING

1. Use firm, fresh vegetables and fruits for making pickles. Fruits may be slightly under-ripe.

2. Some vegetables, such as cucumbers, require soaking in brine before covering with vinegar. This soaking helps to keep the vegetables firm during the succeeding pickling process. It also reduces bitterness. Cucumbers for gherkins should be placed in brine as soon after picking as possible. Cucumbers for dills should be placed in cold water. Holding cucumbers at room temperature for even a few hours may result in hollow centres. When making brine, use the proportion of 1 cup fine salt or 1½ cups coarse salt to 2 quarts (10 cups) water. If not enough salt is used, pickles will be soft or slippery; if too much salt is used, they may shrivel and become tough. Do not use free-running salt. Salt, treated to make it free-running, causes cloudiness in the brine.

3. Use good quality vinegar. If vinegar is too weak, pickles will be soft.

4. The use of a small amount of alum during the pickling process develops a crispness in certain pickles.

5. Spices should be used with caution. This is particularly true of cloves, allspice, and hot peppers since they are exceptionally strong-flavoured. A dark colour or bitter flavour may result from using too much spice, or from boiling the spice too long with the vinegar.

Whole spices give better colour and flavour than ground spices. Whole spices should be tied loosely in a cheese-cloth bag, cooked with the vinegar or pickle, and then removed. The bag should be large enough to allow the vinegar to boil through the spices.

6. In making pickles, use enamel, aluminum, or stainless steel cooking utensils. Since vinegar and salt react with iron, copper and brass, causing discoloration, utensils made of these metals should not be used.

7. Pickles should be stored in clean glass jars, sealers, or crocks. If kept in crocks, pickles should be well covered with vinegar solution to prevent moulding. A plate or wooden board, cut to fit inside the crock, should be placed on top of the pickles and weighted down. A clean stone or other weight may be used. Relishes and sauces should be packed in hot, sterilized jars, completely sealed.

PICKLES

CHERRY OLIVES

Cherry olives are a relish which is characteristic of the fruit districts of British Columbia. The cherries are prepared and served as olives. The Royal Anne or the Byng cherries are suitable.

Wash cherries, pack in jars, and cover with the following solution:—

1 pt. vinegar.
1 tbsp. sugar.
1 pt. water.
2 tbsp. salt.

NOTE.—No heating; no cooking; keep in a cool place.

RHUBARB AND ONION PICKLE

2 qt. rhubarb (cut in small pieces).
2 qt. minced onion.
1½ pt. vinegar.

1. Cook these together 20 min., and add:—

4 lb. brown sugar.
1 tsp. pepper.
1 tsp. salt.
1 tbsp. cinnamon.
1 tbsp. allspice.
½ tbsp. cloves.
A piece of ginger-root.
A little mustard-seed.

2. Boil until fruit is soft. Bottle and seal. (This makes about 7 pt.)

CHILI SAUCE

16 large ripe tomatoes.
2 large onions.
4 green peppers.
2/3—1 c. brown sugar.
1 tbsp. salt.
1 tbsp. whole cloves.
2 tbsp. stick cinnamon (broken).
1 tbsp. whole allspice.
1 tsp. grated nutmeg.
1 c. vinegar.

1. Wash and peel tomatoes and onions; remove seeds and tongues from peppers.
2. Cut tomatoes; chop onions and peppers.
3. Place all together in kettle; add spices tied in cheese-cloth, and other ingredients.
4. Cook slowly 2-2½ hr. or until thick; stir frequently.
5. Seal in sterilized jars.

CELERY SAUCE

8 qt. ripe tomatoes.
4 onions.
2 large heads celery.
2 c. brown sugar.
2½ c. vinegar.
1 tbsp. stick cinnamon.
1 tbsp. cloves.
1 tbsp. whole allspice.
½ tsp. cayenne.
1½ tbsp. salt.

1. Wash tomatoes; peel and cut in pieces.

2. Add onions and celery, chopped.

3. Add remaining ingredients (tie spices in cheese-cloth); cook slowly until thick.

4. Seal in sterilized jars.

BEET AND CABBAGE RELISH

1 qt. chopped cabbage.
1 qt. boiled beets, chopped.
1 c. horseradish.
2 c. sugar.
1 tbsp. black pepper.
½ tbsp. red pepper.
1 tbsp. salt.

Cover all with cold vinegar and mix thoroughly.

PEPPER HASH

1 doz. green peppers.
1 doz. red peppers.
3 large onions.
1 qt. vinegar.
3 tbsp. salt.
2 c. sugar.

1. Remove seeds from peppers and put through the chopper.
2. Cover with boiling water and let stand 10 min.
3. Drain dry and add onions, vinegar, salt, and sugar.
4. Cook 15 min. and pack in jars.
5. Seal.

RECIPE FOR TOMATO CHUTNEY

1 c. tomatoes.
1 apple.
1 medium onion.
½ c. vinegar.
½ tsp. salt.
½ c. brown sugar.
¼ tsp. mustard.
dash cayenne
¾ tsp. cinnamon
¼ tsp. allspice and
¼ tsp. cloves.
¼ c. raisins.

Chop and cook 20 minutes or until thick.—Makes one pint.

15 - 20 minutes to prepare vegetables. Prepare tomatoes first and start cooking in saucepan to shorten cooking period.

Then prepare onion—add to tomatoes. Continue cooking as each vegetable is added. If mixture becomes too dry, add vinegar at any time. Celery and apple chopped and added, then spice.

20 minutes to cook.

QUESTIONS

1. What are micro-organisms? Name three kinds.
2. How can their growth be controlled?
3. A jar of peaches when opened has mould on the top. Explain the reason.
4. Give an example where the growth of moulds is desired in our foods. Where the growth of yeast is desired.
5. Which micro-organism usually grows on meat?
6. Explain the difference between the Open-kettle Method and Cold-pack Method of canning.

7. What is the cheapest equipment that can be used for Cold Pack canning?
8. Explain how to test a jar.
9. What is meant by "blanching"? Why is it done?
10. What are spores? How can we be assured they are destroyed in canning peaches?
11. Give proportions and explain the method of making a medium syrup.
12. How much syrup should you plan for 2 quart jars of fruit?
13. Why is it advisable to have the water 1 inch over the top of the jars when sterilizing?
14. Is it advisable to dry out jars before filling? Why?
15. Should jars be opened to fill the empty space at the top? Why?
16. Why should the jars be only partially sealed before putting in the water bath?
17. In placing jars in the boiler, what precautions should be taken? Why?
18. How long do you sterilize plums? Peaches? Pears? Tomatoes?
19. What are the best vegetables for canning?
20. Why is canned fruit more wholesome than jams or jellies?
21. What causes fruit-juice to jell?
22. What causes a tough jelly?
23. How may we test for pectin?
24. In selecting fruit for jelly, what points would you observe?
25. What are the advantages and disadvantages of preserving food in the home?
26. Name four preservatives and state how they are used.
27. How does Oven Canning differ from the Cold-pack Method?
28. What is the Cellulose Method of juice extraction for jelly making?
29. Why is the pressure cooker not advised for canning fruit?
30. Name several vegetables that are not considered suitable for freezing.
31. Why should food not be refrozen after thawing?
32. What is the advantage of Hot-pack over Cold-pack canning? For which fruits is it not satisfactory?

FREEZING

Freezing is a time and labour saving method of preserving. It retains good colour, flavour, texture and much of the original food value.

What to Freeze

Freeze only high quality foods. Always use garden fresh vegetables. Freeze within a few hours of gathering.

Vegetables

Asparagus, beans, peas, spinach, and whole kernel corn are particularly good when frozen. Corn on the cob has a tendency to develop off-flavours during storage. Those vegetables usually eaten raw, such as celery, tomatoes, lettuce and cucumbers, should not be frozen.

Fruits

Berries, sour cherries and rhubarb are particularly good when frozen. Peaches require special treatment to prevent discoloration. Pears do not freeze well.

Preparation of Fruits and Vegetables

Prepare fruits and vegetables as for canning. To prevent loss of original flavour, appearance and texture, do not prepare too much at a time. Handle and pack fruits and vegetables quickly and carefully.

Blanching:

(pre-cooking)—All vegetables must be blanched before freezing. This helps to preserve colour and flavour. If vegetables are not blanched, enzymes present will cause deterioration, making the frozen vegetables unpalatable.

To Blanch Vegetables

Blanch only about one pound at a time. Use two kettles of vigorously boiling water—at least two gallons in each. Place vegetables in a wire basket, colander or cheesecloth bag and immerse in first kettle of boiling water for 30 seconds. Immediately transfer to second kettle. Start counting time of blanching when water in second kettle returns to boil after vegetable is added. Time accurately.

Chill vegetables immediately after blanching by placing under cold running water or plunging in cold water, preferably ice water. As soon as vegetables are cooled, drain thoroughly.

Packing Vegetables

Pack well-drained, cooled vegetables in moisture—vapour-proof containers.

Packing Fruits:

Syrup Pack:—Most fruits can be cut or sliced directly into container. Berries may be frozen whole. The type of syrup used depends on the tartness of the fruit and on individual taste. Be sure the syrup is cold and that it covers fruit. To keep peaches under syrup and to help prevent surface discoloration, place a crumpled piece of waxed paper on top of fruit.

Leave at least ¼ inch headspace at the top of cartons and at least 1 inch with glass jars.

To prevent discoloration in peaches: Ascorbic acid is effective if 1,000 milligrams of acid, either in tablet or crystalline form are dissolved in each quart of cold syrup. If acid is in tablet form, crush tablets and dissolve in the cold syrup. With crystalline ascorbic, dissolve ½ teaspoon powder in the cold syrup. Pour immediately over fruit in cartons.

To Make Syrup:—For proportions see charts under heading "Steps in Canning". To make syrup add sugar to water, dissolve, and chill.

Amounts of Syrup to Use:—Pint containers.....2/3 to 1 cup.
Quart containers....1 to 1½ cups.

Dry Sugar Pack:—Thoroughly mix the sugar with the fruit by placing a layer of prepared fruit in a bowl, then a layer of sugar—continuing in this manner until all sugar and fruit is used. Stir, or very slightly crush to mix fruit. This will partly dissolve sugar.

No Syrup or Sugar: Some fruits may be packed without syrup or sugar for use later in jams, jellies, or desserts.

Packaging of Fruits and Vegetables

A variety of sizes and shapes of containers for frozen foods made of cardboard,

plastic material or glass are available. They are usually sold in pint and quart sizes. Glass jars are wasteful of space and there is danger of breakage.

Storing of Frozen Foods

If food is to be frozen and stored in a locker plant, place each container, as it is packed, in the refrigerator or very cold place until taken to the locker plant. If using a home freezer, follow the manufacturer's directions. Label all frozen foods, naming contents and date when frozen. It is wise to keep an inventory of the contents of the locker or freezer.

Freeze foods at 0° F. or lower and hold at 0° F., with as little variation in temperature as possible.

Length of Storage

Frozen fruits and vegetables store successfully for one year.

HOW TO PREPARE VEGETABLES FOR FREEZING

Vegetable	Preparation	Blanching Time	Method of Packing	Cooking time before serving
Asparagus	Select young, tender stalks, with tightly closed tips. Remove tough butts and scales. Wash thoroughly to remove sand. Cut stalks in uniform lengths to fit containers. Pack tender butts separately. Blanch.	Medium— 3 mins Large— 4 mins.	Cool quickly, drain. Pack dry.	3 to 5 mins.
Beans (green or wax)	Select young, tender beans. Wash, trim ends and string, if necessary. Leave whole, slice crosswise or cut lengthwise in thin strips. Blanch.	3 mins	Cool quickly, drain. Pack dry.	Green beans— 5 to 7 mins. Wax beans— 4 to 6 mins.
Broccoli	Select dark green, compact heads. Use only heads and tender portion of stalks. Trim and remove the woody stems. Cut through stalks so that pieces of heads are not more than 1 inch across. Wash carefully. Blanch.	2 mins.	Cool quickly, drain. Pack dry.	3 to 5 mins.
Brussels Sprouts	Select compact heads of deep green colour, not wilted. Wash thoroughly. Blanch.	3 mins	Cool quickly, drain. Pack dry.	4 to 6 mins.
Cauliflower	Select compact, white tender heads. Break heads into small flowerettes, about 1 inch in diameter. Wash thoroughly. Blanch.	3 mins	Cool quickly, drain. Pack dry.	3 to 5 mins.
Corn, whole kernel	Select freshly picked corn. Avoid cobs with hard or immature kernels. Prepare immediately. Remove husks and silk. Wash in cold water. Blanch.	3 mins	Cool and cut kernels from cob. Pack dry	4 to 5 mins.
Corn (on cob)	Select corn as for whole-kernel corn. After husking, trim cobs to even lengths to fit containers. Blanch.	Large— 11 mins. Medium— 9 mins. Small— 7 mins.	Cool quickly, drain. Pack dry.	3 to 5 mins.
Peas	Select young, tender peas. Blanch.	2 mins	Cool quickly, drain. Pack dry.	3 to 5 mins.

HOW TO PREPARE VEGETABLES FOR FREEZING *(Cont'd)*

Vegetable	Preparation	Blanching Time	Method of Packing	Cooking time before serving
Peppers	Select firm, crisp well-fleshed peppers. Wash, remove seeds and stem. Leave whole or cut in half.	None	Pack dry.	Use raw in salads or sandwiches or stuff and bake.
Spinach, Chard	Select only tender, green leaves. Remove all discolored or bruised leaves and tough stems. Wash thoroughly in cold water to remove sand and grit. Blanch.	2 mins.	Cool quickly. Avoid matting of the leaves. Drain Pack dry.	3 to 4 mins.
Squash, Pumpkin	Select well-matured squash or pumpkin with dry pulp. Cut or break apart, remove seeds and pithy portion. Cut in small pieces and steam, boil or bake until tender. Cool quickly and remove rind. Mash or sieve.	None	Pack dry.	For use as vegetable—reheat. For use in pies —thaw, then use as canned or fresh-cooked pumpkin.

How to Cook Frozen Vegetables:

The cooking times are approximate and are counted from the moment the water returns to the boil after the vegetable is added. All frozen vegetables require some cooking when they are to be served hot as a vegetable. Cooking methods are the same for frozen vegetables as for fresh, except that the frozen requires a much shorter cooking period—1/3 to ½ the time. Since frozen vegetables have been pre-cooked in the blanching process, and freezing softens the tissues, care must be taken not to overcook them.

Most frozen vegetables do not require thawing before cooking. Spinach should be thawed sufficiently to break the frozen block apart before cooking. Corn on the cob should be almost completely thawed. Peppers may be stuffed and baked either frozen or thawed.

HOW TO PREPARE FRUITS FOR FREEZING

Fruit	Preparation	Method of Packing
Blueberries	Choose well-ripened berries and wash.	Pack without sugar or syrup OR pack in dry sugar, using 5 pounds prepared fruit (about 13 cups) to 1 pound sugar (2 cups).
Cherries (sour)	Choose firm, ripe cherries. Wash, stem and pit.	Pack in dry sugar, using 3 pounds prepared fruit (about 8 cups) to 1 pound sugar (2 cups) OR pack in cold, heavy syrup to cover.
Currants, Cranberries, Saskatoons	Stem and wash.	Pack without sugar or syrup.
Fruit Juices.	Choose firm, mature fruit. Extract juice as for jelly-making.	Pack without sugar, or sweeten to taste.
Fruit Salad or Fruit Cocktail 1 part each of red grapes, green grapes and apples; 2 parts canteloupe; 8 parts peaches	Choose firm, fully ripe fruits. Prepare as for fruit salad or fruit cocktail.	Pack in cold, thin syrup to cover.
Gooseberries	Stem and wash.	Pack without sugar or syrup. OR Pack in dry sugar, using 3 pounds prepared fruit (about 9 cups) to 1 pound sugar (2 cups).
Peaches	Choose firm, ripe peaches. Dip in boiling water ½ to 1 min. then in cold water. Remove skins and pits. Slice fruit directly into syrup in containers.	Pack in cold, moderately thin syrup to cover.
Plums	Choose firm, mature fruit. Wash, halve and pit.	Pack in dry sugar, using 5 pounds prepared fruit (about 13 cups) to 1 pound sugar (2 cups). OR pack in cold, thin syrup to cover.
Raspberries	Choose firm, fully ripe berries. Pick over and wash if necessary.	Pack in dry sugar, using 5 pounds prepared fruit (about 16 cups) to 1 pound sugar (2 cups) OR pack in cold, thin syrup.

HOW TO PREPARE FRUITS FOR FREEZING *(Cont'd)*

Fruit	Preparation	Method of Packing
Rhubarb	Choose tender rhubarb of good colour. (1) Wash and cut stalks in 1-inch lengths. (2) Remove leaves and root ends, cut stalks to uniform size about 8 to 10 inches. (3) Make into sauce.	Pack in dry sugar, using 4 pounds prepared fruit (about 11 cups) to 1 pound sugar (2 cups) OR Pack in cold, medium syrup to cover. Tie in bundles and wrap. Sweeten to taste and pack cold.
Strawberries	Choose firm, fully ripe berries. Wash, sort and hull.	Pack in dry sugar, using 4 pounds prepared fruit (about 12 cups) to 1 pound sugar (2 cups) OR Pack in cold, medium syrup to cover.

How to Use Frozen Fruit

Fruit to be served raw should not be thawed until needed for serving. Do NOT allow thawed fruits to stand for any length of time at room temperature. Fruit should be thawed slowly in the unopened container, either in the refrigerator or at room temperature, inverting the container occasionally to distribute the syrup evenly. A pint container requires about 3 hours to thaw at room temperature and from 6 to 9 hours in a refrigerator.

Fruit to be cooked and served as stewed fruit does not require thawing before cooking. For pies and puddings, thaw fruit sufficiently to spread and proceed as with fresh fruit. Frozen fruit juices may be used as a beverage or for making jelly. When used as a beverage dilute juices to taste.

DO NOT REFREEZE FOOD AFTER THAWING.

SANDWICHES

GENERAL RULES

1. Bread for sandwiches should be fine-grained and 24 hr. old.
2. Cut slices as thinly as possible and remove crusts for afternoon teas.
3. For noon-lunch sandwiches cut slices ¼ inch thick and do not remove crusts.
4. If butter is used, cream it before spreading. If sandwiches are shaped with round or fancy cutters, bread should be shaped before spreading, that there may be no waste of butter.
5. Sandwiches may be made some time before they are to be used and may be kept fresh by covering with a damp cloth or wrapping in paraffin paper.

SANDWICH FILLINGS

1. Equal parts of finely cut nuts and grated cheese, with cooked or mayonnaise salad dressing.
2. Equal parts of grated cheese and olives cut fine, mixed with salad dressing.
3. Equal parts of cream cheese and pimento.
4. Peanuts chopped and salted with salad dressing with white or whole-wheat bread.
5. Fresh crisp lettuce with salad dressing.
6. Hard-cooked eggs and salad dressing. A few drops of onion-juice may be added.
7. Equal parts of chopped almonds and celery with dressing.
8. Crushed maple sugar with thick cream with whole-wheat or nut bread.
9. Alternate about 6 layers of nut and Graham bread. Use cream cheese and grated pineapple and slice across.
10. Cheese rolls—Cut crusts off bread, spread with cream cheese, roll, and toast in oven just before serving.

LUNCH-BOX REQUIREMENTS

1. Lunch box or pail; cleaned daily and well aired; no newspaper wrappings.
2. Wax paper for wrapping sandwiches and cake.
3. Paper napkin.
4. Container with screw-top for jellies, custards, etc.
5. Drinking-cup.
6. Knife, fork, and spoon (if desired).
7. Thermos bottle or jar for milk.

CONTENTS OF LUNCH-BOX

1. Breads—white, whole wheat, raisin, or nut.
2. Sandwich fillings.
   Cottage or cream cheese—plain or mixed with chopped olives, pimento, or nuts.
   Minced fish—salmon, whitefish, halibut, mixed with salad dressing.
   Peanut butter.
   Finely chopped, hard-cooked eggs.
   Baked beans with salad dressing.
   Chopped raisins, dates, figs, and nuts mixed with fruit-juices.
   Lettuce, tomato, cucumber, and celery.
3. Sweets—custards, jellies.
   Fruit—stewed, canned, preserved.
   Fruit, dried—prunes, dates, figs, raisins.
   Plain cake. Plain cookies. Home-made candy.
4. Beverages—milk, fruit drinks.
5. Supplement with a simple hot dish where possible.

INFANT FEEDING

For the first few months of his life the baby's food will likely consist chiefly of milk, supplemented with orange or tomato juice and Vitamin D in the form of fish liver oil or a concentrate. Gradually, as the baby requires them, additional foods are added to his daily menu. By his first birthday, the baby has been introduced to a selected variety of foods from each food group in Canada's Food Rules.

The Baby's Milk

Breast milk is the best and most natural food for infant feeding. It contains almost everything the young baby needs for nourishment in an easily digested form. Breast milk is clean and free from harmful germs. It also provides some protection for the baby against diseases. Breast feeding gives the baby a feeling of comfort and safety. During the first two or three months of the baby's life, breast feeding is particularly important and, if possible, should be continued up to six months.

When for any reason the baby cannot be breast fed, cow's milk is substituted for his needs. Because cow's milk differs from mother's milk, it is changed to resemble mother's milk and to meet the needs of the baby according to the doctor's instructions. The amount of milk, water, and sugar, the number of feedings each day, and the time of feedings, all will be prescribed by the doctor. Further assistance is available from the public health nurse in your community who holds regular child health conferences to provide guidance to mothers on infant care and feeding.

Preparing the Formula

Sterilizing the formula in the bottle by means of a water bath is rapidly gaining in popularity and is the quickest and most satisfactory method known at the present time. All equipment is washed thoroughly in hot soapy water, using a bottle brush to scrub the inside and outside of the bottles, nipples ,and nipple covers. The equipment is then rinsed in clean water and allowed to drain dry. No preliminary sterilization of the equipment is required.

The 24 hour formula is made up by pouring measured ingredients into bottles, capping the bottles and immersing them in a water bath which is allowed to boil for 20 minutes by the clock. The bottles are rapidly cooled and then stored in a refrigerator until needed.

How to Feed the Baby

The doctor will give definite instructions regarding the time of feeding and how closely to follow a feeding schedule. Most babies are fed on a four hour schedule.

When it is time for the baby's feeding, wash your hands thoroughly in soap and water, then take one of the formula bottles from the refrigerator. Place the bottle in a pan of hot water until warm. The warmed milk should always be tested by dropping a few drops on the inside of the wrist until it feels comfortably warm.

Hold the baby on your lap in the crook of your left arm with his head and shoulders raised. The bottle should be held so that the neck is full of milk, thus preventing the swallowing of a large amount of air. Mid-way through the feeding and again after the feeding, hold the baby over your shoulder and pat him gently on the back. This will usually bring up air bubbles that may be in his stomach and may save him many gas pains.

A baby usually takes about 10 to 15 minutes to finish his feeding. If he is well, there is no need to worry when the baby does not take all of his bottle. He is usually the best judge of how much he wants.

The addition of essential supplements in solid foods

Within a short time after birth, the baby's stores of essential vitamins and minerals become depleted. As this occurs, foods must be introduced into his diet to provide him with the nutritional requirements for his growth and development. The age at which these foods are introduced will vary according to the doctor's instructions for the individual child.

The introduction of food is a new learning experience for the baby and therefore the manner in which it is done is important in avoiding the development of future feeding problems. New foods should be offered with a minimum of fuss at the beginning of the meal when the child is hungry. At first, he is given just a taste, and gradually the amount is increased as he learns to accept the new texture and flavour. The refusal of a food should not cause concern. Foods that are refused may be introduced again at a later date quite successfully.

The baby's first solid food will be given to him in a puréed form. Puréed baby foods may be purchased ready to eat or prepared at home. The great saving of time which otherwise would be spent by the mother in making a purée of fruits and vegetables and in grinding meat, may be worth the extra cost involved in purchasing commercially prepared baby foods. The commercial preparation of baby food is now perfected so that as much as possible of the original food value is retained and a fine texture is assured.

Orange juice or tomato juice will be added to the baby's diet starting at about 2 weeks of age, to provide a source of Vitamin C. By one month of age, the baby requires a source of Vitamin D which may be given as cod liver oil, or in a concentrated form.

Usually the first solid food the baby receives is a pre-cooked baby cereal, at about 3 months of age. Gradually a selected variety of puréed meats, fruits and vegetables, junkets, custard and egg yolks are added to the baby's meals.

Before his first birthday the baby will have started to receive his food in a strained form, which is slightly coarser in texture than the puréed form. The baby is now receiving a wide variety of foods which will form his daily meals in the years to come.

Babies learn to like most foods if they are well prepared and offered in a pleasant manner.

INVALID COOKERY

Food for the sick is an important subject. The quantity and kind of food for patients must be varied according to the nature of the disease.

Diets for invalids are classified as liquid, soft, light, and full diets.

A *liquid* diet includes milk, beef tea, broths, beef juice, strained gruels, egg-nogs, cream soups, cocoa, and all other liquid foods. Tea and coffee must be avoided.

A *soft* diet includes dishes in the liquid diet, and also milk toast, soft-cooked eggs, jellies, soft custards, junkets, ice-cream, apple sauce, and cereals.

A *light* diet includes soft-cooked eggs, baked custard, asparagus, gelatine jellies, baked apple, stewed prunes.

A *full* diet includes all foods that are easily digested.

RULES FOR SERVING INVALIDS

1. Be sure the patient is comfortable and the room well ventilated before bringing in the food-tray.
2. Be cheerful and ready to attend to the wants of the patient while the meal is being served.
3. Cook all food carefully and thoroughly.
4. Serve hot food, hot; cold food, cold.
5. Serve food daintily and attractively.
6. Serve food in small quantities as it is more tempting to a delicate appetite.
7. Use the prettiest dishes and the best linen.
8. Put a flower on the tray to make it attractive.
9. Plan to have surprises for the patient in the kinds of food, as well as in the methods of serving.
10. Serve meals promptly.

BEEF JUICE

1. Broil a small piece of round steak.
2. Cut into small pieces.
3. Squeeze the juice from it into a cup.
4. Season with salt and serve.

BEEF TEA

1 lb. round steak. 2 c. cold water.
½ tsp. salt.

1. Remove skin and fat and chop meat finely, or scrape it.
2. Let stand in cold water ½ hr.
3. Place in double boiler and heat gradually, keeping the temperature at 130° F. for 2 hr. Be careful not to let boil.
4. Strain, add salt, and serve.

ALBUMENIZED WATER

1 egg-white. ½ c. cold water.
Lemon or other tart juice.

Add water and fruit-juice to egg gradually, stirring until well blended.

EGG LEMONADE

1 egg. Juice of 1 lemon.
1 tbsp. sugar. ½ c. cold water.

1. Beat white and yolk of egg separately; then together.
2. Add sugar, water, and strained lemon-juice.
3. Beat well; chill.

ORANGE ALBUMEN

1 egg-white. Fruit sugar to taste.
Juice of 1 orange. ⅛ c. cold water.
2 tbsp. lemon-juice

1. Beat egg-white sufficiently to mix with other ingredients.
2. Add water, fruit-juice, and sugar.
3. Strain and chill.

BARLEY WATER

1 c. pearl barley. Salt.
6 c. cold water.

1. Pick over and wash barley; put into double boiler; add cold water and salt; cook 6 hr.

HOME PASTEURIZED MILK

1. Sterilize bottles; drain; fill with milk; cork with baked cotton.
2. Place on rack in a deep kettle; surround with cold water to the level of the milk.
3. Heat gradually to 145° F.; keep at that temperature 30 min.; or bring water to a boil and boil 5 min.
4. Cool quickly; keep in a cold place.

EGG-NOG

1 egg. 1 tbsp. sugar.
2/3 c. milk. Few grains salt.
Nutmeg, vanilla, or other flavouring.

1. Beat egg slightly; add salt, sugar, and flavouring.
2. Mix thoroughly, add milk, and strain.

OATMEAL GRUEL

½ c. rolled oats. ½ tsp. salt.
3 c. boiling water. Milk or cream.

1. Add salt and oatmeal to boiling water.
2. Boil 5 min. over direct heat.
3. Cook 2 hr. in double boiler.
4. Force through strainer, and dilute by adding hot milk or cream.

MILK TOAST

1 c. scalded milk. 1 tbsp. butter.
⅛ tsp. salt. ¾ tbsp. flour.

1. Make a white sauce of above ingredients.
2. Pour over toast and serve very hot.

SOURCES OF FOOD MATERIALS

BREAKFAST FOODS

Breakfast foods are made from all the grains, but chiefly from wheat, oats, corn, and rice. The outer skin is first removed, and then the grain is used in several forms:—

1. *Whole or Broken.*—As in hulled corn, coarse hominy, cracked wheat, whole oats or groats, rice, and pearl barley.

2. *Granulated or Steel-cut.*—As in oatmeal and various granulated wheat preparations, granulated corn-meal, and fine hominy.

3. *Ground Coarse by Crushing.*—As in windmill-ground corn-meal, rye-meal, and barley-flakes.

4. *Steam-cooked.*
   (a) Partially cooked.
      (1) Rolled oats. The grain is steamed, dried, and rolled.
   (b) Completely cooked.
      (1) Shredded wheat. The grain is steamed, shredded and baked.
      (2) Corn-flakes, Rice-flakes. The corn and rice are steamed, dried, rolled through heavy steel rollers, and toasted.

5. *Puffed Wheat and Puffed Rice* are made from the whole grains by heating them under pressure in containers somewhat resembling guns. The grains are revolved in these guns for hours at a high temperature. Then the guns are fired and as a result of the explosion the grains are puffed.

CINNAMON

Cinnamon is the inner bark of young wood of the cinnamon-tree. It is cultivated in Ceylon, East India, and China. Cinnamon is sold in quills and ground for use in cookery as a flavouring material.

The cinnamon-tree grows to a height of 20-30 ft. in its wild state. In cultivation it is kept down to a sapling of 10 ft. or less.

The shoot or branches of about an inch in thickness are cut when the bark is "ripe"; that is, when it separates readily from the wood. These branches are then trimmed to a length of about 4 ft. They are stripped and peeled. The bark is slit and pried off, dried and fermented. Each strip is then placed over a round stick and the thin outer skin is scraped off, exposing the pale-yellow inner bark, which is the cinnamon itself. The strips are dried and formed into "quills," in which they are marketed. In this form we speak of them as "stick" cinnamon. Cinnamon is also purchased in powdered form after grinding.

CLOVES

Cloves are the dried flower-buds of the clove-tree. When plucked they are reddish, but this changes to the familiar dark brown in the process of drying in the sun. The tree is an evergreen which grows to a height of 40 ft., bears its developed clove-buds in its seventh year, and is productive up to the age of nearly 100 years. Cloves are grown in the Molucca or "Spice Islands," the West and East Indies, islands off the coast of East Africa, and other tropical regions.

COCOANUT

The cocoanut-palm is widely grown in South America, the South Sea Islands, the West Indies, Ceylon, and parts of India. The palm grows to a height of 100 ft. and has a long, slender trunk, free of leaves or branches. For commercial use the palm is cultivated in "groves."

The cocoanut as we know it looks like a large woody nut, but on the palm this nut is enclosed in a husk. It is either cut from the tree or allowed to drop of its own accord when ripe. The nut is composed of a white meat and cocoanut-milk. In its early stages this meat is a creamy substance which can be eaten with a spoon.

Cocoanut-oil is obtained by pressing or boiling the white meat. It is used to make "nut butter," cooking-oils, and soap.

"Desiccated" Cocoanut is simply the white meat of the cocoanut, dried and shredded for cooking purposes. Often it is sweetened.

CORN-STARCH

Corn-starch is manufactured from corn. The corn is first cleaned and soaked for two days in warm water, to which is added some sulphurous acid to prevent fermentation. This steeping causes the corn to swell.

It is then coarse ground in mills so arranged as to break up the kernel without breaking the "germ." This ground mass is then run into separators containing water. Since the germs contain fat, they rise to the surface and are carried off. Corn-oil or Mazola is made from the germs.

The rest of the mass settles to the bottom of the separators and by a certain process the protein of the corn is separated from the starch, which at this stage is called "green starch." The green starch is thoroughly washed and dried until only 10 per cent of water is left. It is then ground until it becomes a fine white powder.

Corn-starch is used for thickening purposes and for laundry-work.

CORN SYRUP

Corn syrup is manufactured by a chemical process from "green starch." The starch is changed into sugar in a liquid form. It is sometimes called "commercial glucose."

LARD

Lard is the rendered fresh fat from hogs in good health. The best grade of lard in commerce is known as "leaf" lard. It is taken from the abdominal cavity of the hog. Lower grades of lard are rendered from trimmings and various parts not suitable for making into sausage.

MACARONI

Macaroni is made by mixing hard-wheat flour and water to form a very stiff dough. This is kneaded by machine, and forced through tubes in a metal plate which gives it the shape by which we know it. After this it is dried, inspected, sorted, and packed. We can buy it either in bulk or in package form.

We usually associate macaroni with Italy, but it was first invented in China. To-day most European countries manufacture it, and it is made here in Canada from our own hard wheat.

NUTMEG

Nutmeg is the dried kernel of the fruit of a tropical tree native to the East Indies. The kernels are dried, usually after washing in lime-water, or are powdered with air-slaked lime after drying, in order to protect them from insects. Grinding spices, like grinding coffee, releases the aromatic oils. If the ground spice is then exposed to the air, its fragrance and flavour are soon lost. For this reason many housewives have preferred to buy nutmeg and other spices and grind them as needed. Air-tight packages now on the market prevent the escape of fragrance and flavour into the air.

OLEOMARGARINE

Oleomargarine is the term applied to butter substitutes made by churning fats, other than butter-fat, with milk or cream to a butter-like emulsion.

OLIVE-OIL

Olive-oil is made from ripened olives. The olives are crushed and their liquid is extracted by pressing the pulp. The first oil obtained is known as "crude olive-oil." Refining produces the olive-oil used for salad, which is a golden-straw tint. Olive-oil should not be exposed to extremes of light and temperature.

PAPRIKA

Paprika is grown principally in Spain, Hungary, and America. It is the dried flesh of a large, long, red pepper, powdered, and is mild in taste. It is used extensively for flavouring salads and in making sauces.

PEPPER

Pepper is the berry of a climbing plant which is cultivated in tropical countries. Black pepper is obtained by picking the berries while immature; white pepper, by allowing the berries to ripen and become more starchy.

PRUNES

Prunes are dried plums of the finest grade. The methods of drying vary in different countries. Most of our prunes come from California. By the California method the fruit is allowed to fall from the tree in order to secure the fullest ripeness, and consequently the greatest sugar content. The fruit is immersed in a mild lye solution, followed by a clear water rinse, and dried in the sun. The prunes are then graded, given a cleansing bath of scalding water, dried, and packed in boxes for marketing. The prune has a high sugar content and it is valuable as a laxative. Prunes of a medium size are the most economical. It takes 2½ lb. of fresh fruit to make 1 lb. of prunes, the difference representing the evaporation of water content.

RICE

Rice is the principal food of more than one-third the population of the world. It grows chiefly in the Southern States, China, and India. It looks somewhat like wheat, but at the end of the bearded part each little grain grows singly. It is necessary to keep most kinds of rice flooded during the growing season.

1. *"Unpolished" or Brown Rice.*—After separating the grain by threshing, the outer husk is taken off. It is this outer husk which we call brown or "unpolished" rice. It contains mineral matter and vitamins.

2. *"Polished" Rice.*—After the brown coating is removed from the grains the ordinary white or "polished" rice is left. Some of the diseases found among races whose chief food is rice are due to the fact that they use this polished rice so extensively. However, we can overcome any difficulties of this kind by using rice together with foods which contain vitamins; e.g., tomatoes, etc.

SAGO

Sago comes from the pith of the trunks of the sago-palm. This tree grows in the East Indies and thrives in marshy places. It is a thick-trunked tree, about 30 ft. high. It bears fruit only once—when it is 10-15 years old—and then it dies.

A single tree will yield about 600-800 lb. The palm is cut down and the pith

is taken out and grated to a powder. After it is strained and washed the natives use it for food, but it is not yet ready for export.

It is mixed with water into a paste and rubbed through sieves to form "pearl" sago. A large sieve is used to make "bullet" sago.

Sago is valuable as a food because it is cheap and rich in carbohydrate (starch).

SPAGHETTI

Spaghetti is made in the same way as macaroni, except that the tubes through which it is forced are much smaller.

SUGAR

Our supply of sugar comes from two important sources—the sugar-cane and the sugar-beet.

I. The Sugar-cane

The sugar-cane is a plant which looks like a huge stalk of Indian corn. It grows in tropical and semi-tropical countries.

1. *Manufacture of Raw Sugar from the Sugar-cane.*

(a) The cane is cut to the ground and stripped of its leaves and top and taken to the mills.

(b) The juice is taken out by crushing the cane through rollers.

(c) The juice thus obtained is purified and then boiled to a syrup.

(d) This syrup is boiled until sugar crystals and a dark syrup called "molasses" are left.

(e) The sugar and molasses are whirled round and round in machines. The molasses is collected and brown sugar crystals (called "raw sugar") remain.

(f) The molasses is often boiled to make "molasses sugar," and the thin syrup which is left is called "blackstrap molasses."

2. *Refining of Sugar.*

(a) Raw sugar is washed by adding water.

(b) The syrup thus made is purified and the colour is taken out of it.

(c) After this the syrup is boiled until sugar crystals are formed.

3. *Different Kinds of Manufactured Sugar.*

(a) Granulated Sugar.—The syrup of 2 *(c)* is passed into machines, where the sugar crystals are separated, dried, and ground.

(b) Powdered Sugar is granulated sugar ground very fine. It is sold under the name of "Berry sugar," "Castor sugar," "Bar sugar," or "Fruit sugar."

(c) Loaf Sugar or "Lump" Sugar.—Sugar crystals are moistened with a little syrup and poured into moulds and compressed.

(d) Icing-sugar is finely powdered sugar with corn-starch added.

II. The Sugar-beet

The sugar-beet is a long, white tuber which grows in Eastern Canada, Alberta, British Columbia (to a limited extent), Europe, and the United States.

1. *The Manufacture of Beet-sugar.*

(a) Beets are grown from very carefully chosen seed. They are then sent to the mills along underground tunnels.

(b) The beet is sliced and placed in "cells," where the juice is taken out. After this the steps are the same as those followed in the manufacture of cane-sugar,

with this exception: *The "raw" sugar and molasses which come from the beet are never sold as they have an unpleasant flavour.*

III. Maple Sugar

In North America we get another kind of sugar. This is obtained from the sugar-maple. To-day we use this sugar as a confection, but in the early days it was the only sweetening agent the settlers had.

How to Get Maple Sugar.

1. In February or March holes are bored in the hard maple-trees.
2. Spouts are put into the holes and buckets are placed on the spouts.
3. The sap flows until the trees begin to bud.
4. The sap is put into barrels and sent to the sugar-house where it is boiled either to the syrup stage, yielding "maple syrup," or to the crystal stage, yielding "maple sugar."

TAPIOCA

Tapioca is made by heating the starch obtained from the roots of the cassava, a plant which grows in South America, West Indies, and Malay Peninsula. The root is grated and washed, the starch is taken out, mixed with water, and heated so as to burst the starch-grains.

"Pearl" tapioca is made by forcing the moist starch through sieves.

"Minute" tapioca is made by grinding pearl tapioca.

VANILLA

Vanilla is made from vanilla-beans. The vanilla-plant is a climbing vine which grows in the West and East Indies and Southern Mexico. The beans are gathered while just showing a yellowish tint, and are dried in the sun until they attain a rich chocolate shade. In making vanilla extract, the beans are cut fine and immersed in a mixture of grain alcohol and water. A few days later this liquid is poured off and bottled.

VERMICELLI

Vermicelli is another product which is made in the same way as macaroni, but the tubes are smaller than those used for spaghetti. Sometimes it is cut into fancy shapes, such as alphabets, etc., and is used in soups.

CHEMICAL TEST FOR FOODSTUFFS

Adapted from "Our Environment," by Wood & Carpenter

PROBLEM I

To detect the presence of starch and sugar in foods.

Apparatus and Materials

Bunsen burner, several test-tubes, Fehling's solution, corn-starch, grape-sugar, some white bread, boiled potato, lemon-juice, iodine solution.

Method

1. Place iodine on some of the corn-starch. Note the reaction. *The blue-black colour is a sure test for starch.*

2. Place a small portion of the potato in a test-tube with water and heat over the flame until it begins to boil. Pour into the test-tube some of the iodine solution. Note the reaction.

3. Place a drop of iodine on the white bread and a few more drops on a small amount of lemon-juice in a test-tube. Record the results.

4. Now place a small amount of sugar in a test-tube about one-quarter full of water. Heat over the flame until the solution shows signs of boiling. Now pour in a small amount of Fehling's solution. Heat again. Note the changes in colour and particularly observe the last colour produced. *This brick-red or terra-cotta colour is a sure test for grape-sugar.*

5. Now test some of the potato in water in a test-tube with the Fehling's solution. Note the result and record it.

6. Try the bread next and then the lemon-juice in the same way.

Observations

1. What is the test for starch?
2. Was starch found in bread? In the potato? In the lemon?
3. In which was most found?
4. What is the test for grape-sugar?
5. Was sugar found in the potato? In the bread? In the lemon?
6. Would you expect to find sugar in lemon? Explain this. Why?

Conclusion

How would you test foods for the presence of starch and grape-sugar? Give full statements. Test some other foods.

PROBLEM II

To detect the presence of fats and proteins in foods.

Apparatus and Materials

Bunsen burner, test-tubes, glazed paper, olive-oil, white of egg, a piece of bacon, bread, half a small potato, a Brazil nut, nitric acid, household ammonia.

Method

1. Place some of the olive-oil on paper. Allow it to spread a little. Hold high over the flame. Note the effect of the oil on the paper as you hold it up to the light. *Oil always makes glazed paper semi-transparent.*

2. Rub the Brazil nut on a dry part of the paper. Try the bread next, and then a piece of bacon. Note the relative results and record them.

3. Place some of the egg-white in a test-tube and pour in some nitric acid. Boil. Note the effect and the final colour of the egg-white. Now add a few drops of household ammonia. Note again the final colour effect. *This is the test for protein.*

NOTE.—Burn any food. If the fumes given off remind you of burning leather or feathers, it contains protein.

4. Now place some of the acid on some bread and note the effect. Add a few drops of ammonia. Note the effect. Try the same test with the bacon, the Brazil nut, and the potato, being sure that you get the chemicals on the skin of the potato as well as on the white part.

Observations

1. What effect does the oil have on the paper?
2. Is there oil in the Brazil nut? In bread? In bacon?
3. Does the potato contain fat?
4. What is the test for proteins?
5. What effect does the ammonia have on egg-white?
6. Is there protein in bread? In bacon? In Brazil nuts? In potato?

Conclusion

What are the tests for fat and proteins? How would you test orange-juice, beef, and syrup for proteins? Try these tests on some of the common foods and report on them.

PROBLEM III

To detect minerals in foods.

Apparatus and Materials

Bunsen burner, an iron spoon, sugar, lean beef, bread.

Method

1. Place the sugar in the spoon and hold it over the flame. Note what happens. Hold in position until there is no more burning. Remove what is left and place on a piece of paper.
2. Now place the meat in the spoon and treat it in the same way. Finally, treat the bread in the same manner.

Observations

1. What happened to the three foods?
2. Did they disappear entirely?
3. Why did they not completely burn?
4. What was left?
5. What is the nature of ashes? What is the appearance of these ashes?

Conclusion

Do foods contain minerals? What do you suppose is the nature of these minerals?

Practical Application

Of what value could minerals be to the human engine?

INDEX

NOTES

Date Due

MAR '70 RETURNED			
MAR 7 '70			
APR 20 '70 RETURNED		APR 19 RETURN	
APR 1 '70		SEP 20 RETURN	
APR 1 '70		NOV 18 RETURN	
APR 70 RETURNED			
		FEB 10 RETURN	
APR 14 '70			
CURR OCT 30 '70		DEC 1 RETURN	
OCT 28 RETURN		EDUC FEB 13 '76	
JAN 28 RETURN		EDUC FEB 20 '76	
CURR MAR		EDUC FEB 26 '76	
MAR 4 RETURN		FEB 23 RETURN	
		DUE EDUC MAR 10 '88	
DEC 1 RETURN			
JAN 13 RETURN